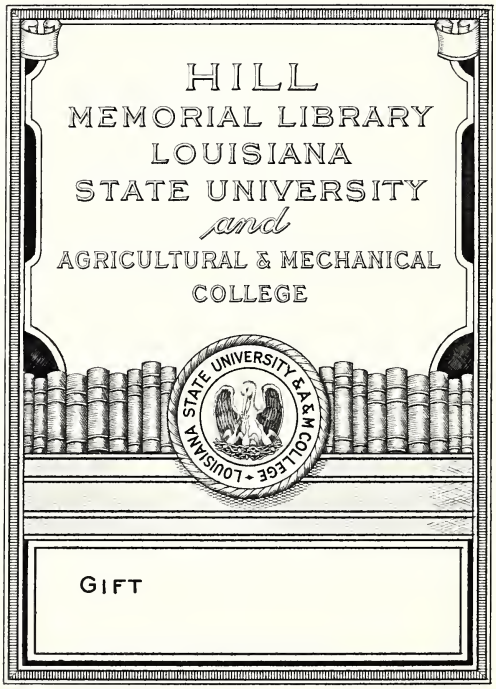
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# THE SUGAR BULLETIN

l. 35 — No. 1 OCTOBER 1, 1956

*icial Bulletin of the American Sugar Cane League of the U. S. A*

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Published on the First and Fifteenth of each month
in the interests of the Domestic Sugar Cane Industry

THE
# SUGAR BULLETIN

414 Whitney Bldg., New Orleans 12

Gilbert J. Durbin, Editor — Andrew W. Dykers, Managing Editor

Lloyd L. Lauden, Agronomist and Field Representative

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*We stand for the encouragement of Home Industries as against Foreign Competition*

# UP FRONT WITH THE LEAGUE

*by A. W. Dykers*

## Annual Meeting Held

Your League held its thirty-fourth annual meeting on September 27th in New Orleans.

Thirty-four years is a long time. In fact we can almost hear our readers saying that the League was organized "long before they were born", and a lot of them will be telling the truth. Not so with the writer, however, who is definitely in the "I remember when" class.

And, speaking of "I remember when", back in the early days of the League we printed 1,800 copies of *The Sugar Bulletin* and had a few left over. We mailed over 9,000 copies of our last issue which, to us, is a good indication of how the American Sugar Cane League has grown in numbers and prestige during the past three and a half decades. Sugar people all over the world read *The Sugar Bulletin.*

The Annual Meeting was a very representative gathering and everyone seemed to enjoy the report of the President which we are printing in this issue beginning on page 414.

The following officers were elected at the Annual Meeting to serve for another year:

President, F. A. Graugnard, Jr., St. James, La.; 1st Vice-President, Ed. Schexnayder, Bayou Goula, La.; 2nd Vice-President, Bronier Thibaut, Napoleonville, La.; 3rd Vice-President, Warren Harang, Jr., Thibodaux, La.; 4th Vice-President, Josiah Ferris, Washington, D. C.; 5th Vice-President and General Manager, Gilbert J. Durbin, New Orleans, La.; Vice-President Emeritus, Marcel J. Voorhies, Baton Rouge, La.; Treasurer, T. M. Barker, Lockport, La.; Secretary, J. J. Shaffer, Jr., Ellendale, La.

Also elected were the following members of the Executive Committee:

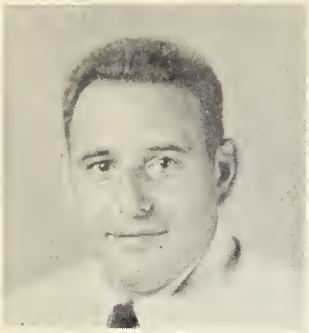
P. L. Billeaud, Broussard, La.; L. A. Borne, Raceland, La.; H. K. Bubenzer, Bunkie, La.; J. P. Duhe, Jeanerette, La.; F. Evans Farwell, New Orleans, La.; Murphy J. Foster, Franklin, La.; Andrew P. Gay, Plaquemine, La.; W. F. Giles, Jeanerette, La.; Walter Godchaux, Jr., New Orleans, La.; Wallace C. Kemper, New Orleans, La.; Clifford LeBlanc, White Castle, La.; John B. Levert, New Orleans, La.; Earl G. Luke, Franklin, La.; E. W. McNeil, Cinclare, La.; J. J. Munson, Houma, La.; Charles C. Savoie, Belle Rose, La.; James C. Thibaut, Donaldsonville, La.; Ivan M. Wilbert, Plaquemine, La.; Horace Wilkinson III, Port Allen, La.; M. V. Yarbrough, Youngsville, La.

Honorary Members of Executive Committee: Stephen C. Munson, Jeanerette, La. and David W. Pipes, Jr., Houma, La.

## High Yield Awards

We have listed the names of Officers and Executive Committee Members that will be in charge of the American Sugar Cane League for another year and now we have the pleasure of listing the names of the

(Continued on next page)



# IN THE FIELD WITH LLOYD LAUDEN

*by Lloyd L. Lauden*

## Deliver Fresh Cane For More Profit

Experiments carried on for two havesting seasons by the L. S. U. Sugar Factory Southern Regional Research Laboratory and the American Sugar Cane League have proved beyond any doubt that you as a sugarcane grower profit considerably by delivering fresh cane.

These experiments were conducted with large samples of four varieties. Many two ton samples were used of each of the four varieties. The varieties used were N.C.O. 310, C.P. 44-101, C.P. 47-193 and C.P. 48-103.

Two years of study proved that cane loses about 10% in weight in 7 or 8 days after being cut.

The experiments also proved that sucrose and purity go down after the cane is cut. The longer the delay in milling the greater the loss.

In dollars and cents, last year's experiment showed that a $40 profit per acre would have been made by delivering fresh cane as compared with delivering five-day older cane. A $48 profit per acre would have been made by delivering fresh cane as compared with delivering nine day older cane. These figures assume an average yield of 25 tons per acre.

If you are delivering stale cane, multiply either the $40 or the $48 by the number of acres in cane . . . it's a big check.

The loss in weight is very easy to prove on the farm. Weigh out on any reliable scale about 200 to 300 lbs. of cane, then place this cane back in the field in the normal manner cane is left on the ground. After about 7 or 8 days pick this same cane up to be weighed for loss in weight. Try this out. It will be very convincing.

Much progress has been made in the past two seasons. Fresh cane delivery was much better in 1955 than in 1954. Because sucrose and purities were generally low in 1955 farmers did everything in their power to deliver "par" cane. They found that the delivery of fresh cane definitely helped. Fresh cane will not only help when sucrose and purities are low but will help every ton of cane hauled to the mill and in every year.

Reports from several areas indicate that sucrose and purities are better this year than at this time last year. It is hoped that this will be generally so in the belt. But in any event the delivery of fresh cane will be profitable.

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cane farmers who have been honored by the American Sugar Cane League and the L.S.U. Extension Service for producing more cane per acre than anyone else in their acreage categories.

The future of the Louisiana sugar industry depends on the ability of our farmers to continue to improve their acreage yields and a large percentage of the League's activities are devoted to the task of coordinating the experimental work that will show us how to produce more cane per acre.

The recipients of the high yield awards have demonstrated the value of scientific farming and by so doing

# IN WASHINGTON WITH JOE FERRIS

*by Josiah Ferris*

### Wage and Fair Price Determinations Delayed

According to officials of the Sugar Division, U. S. Department of Agriculture, the issuance of a Determination covering harvesting and cultivation wages and fair price for cane has been delayed. The department originally planned to issue the Determination during the third week in September. Sugar Division officials say they are extremely unhappy over the unexpected delay and are working "day and night" in an effort to have the Determination ready for Louisiana growers and processors not later than the second week in October.

### Sugar Beet Acreage Increased

The U. S. Department of Agriculture has announced that the national acreage allotment for the 1957 crop of sugar beets has been set at 885,000 acres. This allotment for 1957 compares with the allotment of 850,000 acres established for 1955 and 1956. The increase, according to the Department of Agriculture, reflects changes in quotation for beet sugar established by recent amendments to the Sugar Act.

The national acreage allotment of 885,000 has been allotted to twenty-two states for distribution as proportionate shares, individual acreage allotments, to persons requesting acreages on or before specified closing dates for accepting requests which ranged from October 26, 1956 in northern California to March 29, 1957 in southern California.

Except for 500 acres set aside as a national reserve, the entire acreage has been allotted to the various states. The department spokesman said that in computing the state allocation the 1955 crop allocations were used as a bases, except for four states. For Nevada, which had no 1955 crop allocation, the 1956 crop allocation was used as a base. For Indiana, Michigan, and Wisconsin, states in which the planted acreages for both the 1955 and 1956 crops were less than 90% of the effective allocations, their 1956 crop allocations were extended as allotments for the 1957 crop.

The Agricultural Stabilization and Conservation (ASC) State Committees will establish individual farm proportionate shares from state allocations under standards and procedures generally similar to those effective for the 1955 and 1956 crops. One change, however, permits the use of 1956 crop shares as bases for the 1957 crop and another requires the setting aside for new producer shares a minimum of two percent of each state allocation instead of one percent as previously required.

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have rendered an invaluable service to the Louisiana Sugar Industry.

The top producers in the five acreage groups are listed below:

District 1, Lafayette, Vermilion and St. Martin parishes: Bennet Tally, Breaux Bridge, 39.2 tons, 47.3 acres; Elmore Albert, St. Martinville, 24.8 tons, 89.6 acres;

(Continued on page 13)

# REPORT OF PRESIDENT GRAUGNARD TO THE THIRTY-FOURTH ANNUAL MEETING OF THE AMERICAN SUGAR CANE LEAGUE

Members of the American Sugar Cane League and our distinguished guests.

Time marches on. One year has passed since you did me the honor of electing me President of the American Sugar Cane League. That this year has seemed to me to pass so quickly is a tribute to the very fine co-operation I have enjoyed from each and every one of you. I assure you that it has been a great pleasure to work with all of you in our joint efforts to promote the welfare of the Louisiana Sugar Industry.

A good many significant achievements have gone into the record during the past twelve months. First and foremost among these is, of course, the final passage of the amended Sugar Act that restored to us our rightful share of the sugar markets in this country.

At 9:05 on the morning of May 29th, 1956, President Eisenhower affixed his signature to the bill that made this legislation a law of the land, and our long, drawn out fight to improve the position of the domestic sugar industry was brought to a successful conclusion.

There were, of course, many people both in and out of public life who worked for the passage of the Sugar Bill and we are grateful to all of them. I believe that all of you will agree, however, that we owe a special debt of gratitude to Wallace Kemper, Chairman of the Legislative Committee of the American Sugar Cane League; to Hale Boggs and Ed. Willis, the Louisiana Congressmen who spearheaded the fight in the House, and to Senators Ellender and Long, who championed our cause in the Senate. Without their untiring work the opposition would probably have emasculated the legislation.

Prior to the final passage of the Sugar Act, in cooperation with the beet sugar people, we were successful in arranging a purchase by the Government of 100,000 tons of over-quota sugar for the Government's foreign relief program. It is significant to note that this was the first time that sugar had been purchased from the mainland producers for this purpose. Louisiana's share of the purchase amounted to 58,520 tons. Bill Chadwick and the members of the Mill Marketing Allotment Committee did most of the hard work connected with the distribution of the purchase among the mills and negotiating contracts with the Government.

I feel that we owe Bill a special vote of thanks for his good work in this connection and also for his usual fine presentation of our recommendations at the Acreage Allotment Hearing which resulted in the restoration in 1957 of the thirteen per cent acreage cut we received this year.

**The acreage permitted for 1957 is actually about 15 per cent above this year's acreage and is the first really good news that our farmers have had in a long time. It was made possible by the new sugar legislation and by the over-quota sugar purchase, and this prompts me to repeat that the passage of the Sugar Act was the outstanding achievement of the past twelve months.**

The American Sugar Cane League participates in so many different endeavors it is impossible to cover all of them in the short time available to me.

I direct your attention to a few of the significant activities engaged in by the League during the past twelve months.

The cane breeding program at both the U. S. D. A. and L. S. U. Experiment Stations which is the lifeblood of our industry.

(Continued on page 11)

# BREEDING BEHAVIOR OF CERTAIN AGRONOMIC CHARACTERS IN PROGENIES OF SUGARCANE CROSSES[1]

*By Leo P. Hebert, Research Agronomist, Field Crops Research Branch, Agricultural Research Service, United States Department of Agriculture*[2]

## Introduction

Development of sugarcane varieties meeting the exacting demands of the Louisiana sugar industry presents many problems in a number of related fields of agriculture. To be acceptable, a variety must possess a satisfactory degree of resistance to diseases, insects, and to inversion of sucrose after cutting; but additional essential considerations are its ability to produce relatively high yields of cane and sugar from two or three successive crops from one planting, and its adaptability to mechanical harvesting.

Among the characters which determine yield are stalk diameter, number of shots per stool (tillering ability), length of stalk, and Brix and percent sucrose in the juice.

Each year a large number of seedlings from crosses made at the United States Sugar Crops Field Station, Canal Point, Florida, and more recently from crosses made at Grand Isle and Baton Rouge, La., are grown as single stools by the U. S. Department of Agriculture at the U. S. Sugarcane Field Station, Houma, La., for the purpose of selecting varieties satisfying these requirements. Since a considerable amount of labor and funds is involved in this selection work each year, there is a real need for information which would enable us to predict with a greater degree of certainty the manner in which important characters are inherited in progenies from different crosses and the behavior of these characters in single stools and subsequently in clones established from these single stools.

A knowledge of the relation or association of different characters in the single stools or the clones, and of the association of the same characters between single stools and clones, or varieties established from the single stools, would be of much value in making the selections of commercial type among this large number of seedlings produced each year in the sugarcane breeding program.

## Materials and Methods

During the fall of 1953, a study of the breeding behavior of agronomic characters was undertaken at the Houma Station with progenies of seven crosses made at the Canal Point, Florida, breeding station of the U. S. Department of Agriculture. The study continued through the 1955 crop and included studies of single stools as well as the plant cane and first stubble crops established from these single stools.

The characters included were stalk diameter, erectness of stalks, number of stalks per stool, and Brix and sucrose (pol.).

In the fall of 1953 records were kept on a total of 1,463 single stools for stalk diameter, erectness of stalk, number of stalks per stool, and Brix. In November 1953 clones were established from single stools of the seven crosses. Sufficient material was used to establish five-foot plots of each clone. When available, 150 clones of each cross were planted, but in the case of two of the crosses, fewer than 150 were available. In order to compare the performance of the parents with the progeny, four plots of each parent were interspersed among the plantings.

In November 1954 the clones were evaluated for stalk diameter, erectness of stalks, number of stalks per stool, and number of stalks per clone. In addition Brix and sucrose percentages in the crusher juice were determined for each selection and parent by milling five stalks of each in

(Continued on page 9)

# THE INTERNATIONAL SUGAR AGREEMENT

The following letter relative to this country's participation in the conferences concerning the International Sugar Agreement is dated September 26th and signed by Dudley Smith, Vice President of the Association of Sugar Producers of Puerto Rico; Slator Miller, Vice President of the Hawaiian Sugar Planters Association; Joseph Ferris, Vice President of the American Sugar Cane League, and Richard W. Blake, Frank A. Kemp and Robert H. Shields for the American Beet Sugar Policy Committee.

The letter was addressed to the Honorable Herbert Hoover, Jr., Under Secretary of State and the Honorable True D. Morse, Under Secretary of Agriculture, with copies going to Lawrence Myers, Director of the Sugar Division of the U.S.D.A. and Mr. Ben H. Thibodaux, Director, International Trade & Resources, of the U. S. Department of State.

Gentlemen:

As you know from earlier communications, the domestic sugar producing industry favors a sound and effective International Sugar Agreement which would, in its judgment, offer a fair chance, (1) of stabilizing world sugar prices at equitable levels for the mutual benefit of both sugar producers and consumers, (2) of maintaining purchasing power in sugar exporting countries so as to permit air living standards and wage rates in those areas, (3) of encouraging, in every practicable way, increased consumption of sugar, and (4) of fostering orderly marketing of sugar.

As pointed out in these same communications, the domestic sugar producing industry believes the United States' position at the forthcoming Geneva Conference should be governed by the following principles:

1. Since the United States has its own independent sugar program, also exempt under the terms of the Agreement from the operations of the world quota system, we believe that the United States should not get out in front and take the lead in the negotiations at Geneva.

2. Inasmuch as we are convinced that no sugar producer who must sell in the "world market" can today maintain fair living standards and wage rates unless the price he receives for his sugar is at least up to the minimum range in the present Agreement, we think the United States should not support any Agreement which includes a minimum price objective lower than the three and a quarter cent minimum in the present Agreement.

3. We believe the United States should recognize that probably no Agreement would be workable unless countries representing the production and consumption of more than two-thirds of the sugar moving in International Trade are signatories.

4. We believe the United States should oppose any international agreement which would adversely affect any domestic sugar program which the Congress has already provided or may in the future provide.

The domestic industry is vitally interested in the success of the Geneva Conference. It would be appreciated, therefore, if its accredited industry representatives could be kept as fully informed of the progress of the Geneva meeting as is practicable so that the industry might give such further advice and assistance as may be indicated. If deemed necessary, the industry's accredited representatives would be glad to confer personally with representatives of the United States Delegation in Geneva while the conference is in progress.

Assuring you of our continued in-

## SUGAR MARKET STATISTICS THROUGH SEPT. 25, 1956

| | Today | 1 Month Ago | 1 Year Ago |
|---|---|---|---|
| QUOTA RAWS DELIVERED NEW YORK | 6.10 | 6.07 | 6.05 |
| QUOTA RAWS DELIVERED NEW ORLEANS | 6.04 | 6.01 | 6.03 |
| WORLD SPOT RAWS (In Cuba) | 3.23 | 3.30 | 3.28 |

SUGAR FUTURES No. 6
(Closing Bid Prices)

| | Nov. | Mar. | May |
|---|---|---|---|
| Today | 5.60 | 5.44 | 5.47 |
| 1 Month Ago | 5.56 | 5.40 | 5.43 |
| 1 Year Ago | 5.53 | 5.38 | 5.42 |

OFFSHORE RECEIPTS AT NEW ORLEANS
(Long Tons, 2,240 lbs.)

| | To Date 1956 | Same Date 1955 |
|---|---|---|
| American | 322,625 tons | 349,362 tons |
| National (Godchaux) | 189,943 tons | 153,358 tons |
| Colonial | 138,922 tons | 90,571 tons |
| Henderson | 92,490 tons | 78,378 tons |
| Southdown | 37,577 tons | 20,519 tons |
| South Coast | 68,561 tons | 44,589 tons |
| Supreme | 97,813 tons | 95,673 tons |
| Totals | 947,931 tons | 842,450 tons |

terest in the success and renegotiation of a sound and effective International Sugar Agreement, we are,

Very truly yours

—o—

## BREEDING

(Continued from page 7)

a sample mill which gives 60 to 65 percent extraction with a variety having milling qualities similar to Co. 281.

In November 1955 the 869 clones remaining were again evaluated for stalk diameter, erectness, number of stalks per stool, Brix and sucrose. Stalk diameter was obtained by caliper measurements at the middle of the internode nearest the mid-point of the mature stalk. Values recorded for the single stools were the averages in millimeters of five measurements made on a like number of stalks.

In ranking sugarcane as to erectness of stalk, a subjective rating based on the following scale has been in use at the Houma Station for some time: 1=very superior; 2=superior; 3=average; 4=inferior; 5=very inferior. A variety must have at least a 4 rating to be adapted to mechanical harvesting in Louisiana. Although the absolute value assigned to a particular variety is subject to change under different sets of growing condition, the relative position of each variety usually remains fairly constant.

Brix values for all three years were determined in the field by hand refractometer readings of the juice obtained with a Hawaiian-type punch. This special punch contains a reservoir in which the juice from a number of stalks can be collected. Samples were taken from the center of the internode nearest the mid-point of the stalk. The juice from 5 different stalks was composited for each reading whenever five stalks were available.

For Brix determinations in the laboratory, immediately after extracting the juice samples with the Hawaiian punch as described above, the same stalks were cut and taken to the laboratory and milled to levels of extraction ordinarily obtained with factory crusher rolls, or ap-

(Continued on next page)

proximately 65 percent. All stalks large enough, whether damaged by wind or borers, were counted for the purpose of calculating the number of stalks for each year of the study. In the single stools the number of stalks in each stool were counted and recorded. In the case of the clones, or line tests, in both 1954 and 1955 all stalks in a clone were counted, and this number was divided by the number of stools to obtain the average number of stalks per stool.

Correlation coefficients were calculated for association between different characters in the same year and for the same character between different seasons for each cross separately and for the average of all crosses.

## Summary of Results

### Association Between the Same Characters during Different Seasons

The degree of association as measured by the correlation coefficient for stalks diameter between single stools and plant cane clones or varieties in line tests, between single stools and first stubble clones, and between plant cane and first stubble of clones established from the single stools was high enough to indicate that selection for stalk diameter would be effective and should be practiced, but that this selection should not be too rigid.

The relatively low correlation coefficients for erectness of stalks and number of stalks per stool indicated that the association for each one of these characters between different years was of such a low order that rigid selection should not be practiced for erectness of stalks or size of stool in the single stool stage, or in any single year of the clone.

Correlation coefficients for Brix between different years were high enough to be of importance in the average of all crosses, but there were wide differences between crosses in that respect and it is concluded that due consideration should be given to this fact in the breeding program. Selection for Brix as determined b a refractometer in the field should b practiced but should not be too rigi

Both sucrose by polarization ar Brix by hydrometer, as determine in the crusher juice from five stalk showed a high degree of associatio between different years and are co sidered reliable criteria in evaluatin varieties.

### Association Between Different Characters in the Same Season

There was a close association be tween Brix and sucrose for bot plant cane and first stubble of th clones or varieties in line tests. Thi was expected since sucrose is a com ponent of Brix. The number of stool per plot and number of stalks pe stool exhibited a negative associatio i. e., the higher the number of stool per plot the lower the number o stalks per stool. This association wa not statistically significant.

The following characters were in dependent as indicated by low de gree of association in all the crosse studied: (1) stalk diameter an erectness of stalks, (2) stalk diame ter and number of stalks per stool (3) stalk diameter and Brix, (4) erectness of stalks and number o stalks, (5) erectness and Brix, (6) number of stalks per stool and Brix (7) stalk diameter and sucrose (pol.) (8) erectness and sucrose (pol.) and (9) number of stalks pe stool and sucrose (pol.).

Since they are all independent it is concluded that no special difficulty should be encountered in selecting individuals having any desired combination of these characters.

### Breeding Behavior of Characters Studied

In general the progenies of crosses involving large-diameter parents were large in diameter and, conversely, the progenies of crosses involving small-diameter parents were small in diameter. There were exceptions and in many of the single stools the stalks were either larger or smaller than the stalks of either parent involved

n the crosses. Erect parents general-
y produced erect individuals in their
rogeny, and recumbent parents pro-
uced recumbent progeny. The aver-
ge ranking of the two parents in
espect to erectness agreed very
losely with the average ranking of
heir progeny.

The number of stalks per stool in
he progeny agreed closely with the
umber of stalks per stool in the
arents involved in the cross. The
rogeny of crosses whose parents
ere high in Brix were relatively
igh in Brix, and the progeny of low-
rix parents were low in Brix. There
ere exceptions to this and some in-
ividuals were higher in Brix than
ither parent, while others were low-
r than either parent in that respect.

[1] Resumé of a dissertation presented to he Graduate Faculty of the Louisiana tate University in partial fulfillment of he requirements for the degree of Doctor f Philosophy in the Department of Agron-my, June 1956.

[2] The author wishes to express his sin-ere appreciation to Dr. M. T. Henderson f the Agronomy Department, Louisiana tate University, for his kind assistance in lanning this study and in the interpreta-ion of the results and the preparation of he manuscript.

—o—

## REPORT

(Continued from page 6)

The propagation of promising new ane varieties resulting from the cane reeding program. (Four promising ew varieties will be transferred to he secondary stations this fall).

Experimental work at the U. S. D. A. Canal Point Station.

(S. C. Munson, Horace Nelson, Elliott Jones, Gilbert Durbin and Lloyd L. Lauden visited the Canal Point Station in February to exchange ideas with the scientists in charge of the cane experimental work there.)

Mr. S. C. Munson, Chairman of the eague's Contact Committee, con-erred with Government officials in Washington about the need of our ndustry for more research work on ugarcane.

The American Sugar Cane League aid part of the expenses of Dr. S. J. P. Chilton's trip to Hawaii, Australia, and India early this year. Dr. Chilton attended the meeting of the International Society of Sugar Cane Technologists last January in India, and stopped en route to exchange information with experts of the Hawaiian and Australian sugar industries.

League funds paid for the heating unit installed in the cane greenhouse at Canal Point, Florida.

The League has actively promoted the installing of heat treating units in individual farms to control the Stunting Disease. Sixty of these units are in operation this year and all of them were personally tested by our technologist, Lloyd L. Lauden, and by Rene Steib of L. S. U., and Charles Schexnayder of the U. S. D. A., Houma Station, to assure their efficient operation.

The League has actively backed studies on deep tillage being conducted cooperatively by the U. S. D. A. and L. S. U. and was instrumental in obtaining $4,500 additional State funds for this project for the fiscal year ending June 30th, and $5,000 more for the current fiscal year.

Twenty-five hundred dollars of League funds are being used this year for farm machinery research at the U. S. D. A. Houma Station.

The League, in cooperation with the Extension Service, is sponsoring a high cane yields honor program in the various sugar parishes and is also sponsorng a 4-H Club sugar cane project.

At the request of the Southern Farm Forum, your President spoke to the delegates and explained some of the problems confronting the Louisiana sugar industry.

Your League entertained the Commissioners of Agriculture from the 48 States, Hawaii, and Puerto Rico at a luncheon in New Orleans last October and I again had the privilege of telling our story to a distinguished group of influential men.

Your League participated, along with other groups, in a luncheon hon-

oring the Louisiana Congressional Delegation held in New Orleans December 1, 1955.

Your League arranged for the making of an educational television film showing cane breeding work at L. S. U.

A weekly column on the sugar industry is being furnished more than 30 Louisiana newspapers by your General Manager.

Your League, in cooperation with certain producers, has advertised the Louisiana sugar industry in each of the three New Orleans newspapers.

Your League is cooperating with the Louisiana Festival and Fair Association and has contributed $1,000. to the Association. Incidentally, our good friend Jack Shaffer has been chosen to reign as King Sucrose XV.

Gilbert Durbin and Lloyd L. Lauden have been on numerous farm radio programs explaining different problems confronting the Louisiana sugar industry, and Lloyd has appeared in one farm television program.

A bill to license rain making activities in Louisiana, sponsored by the League, was passed by the Louisiana State Legislation and signed by the Governor.

Your League is making a concerted effort to secure additional Federal funds to expand the milling research program. It is hoped research will show us the way to reduce our milling costs and relieve in part the present squeeze of low sugar prices and rising production costs.

In this connection, it is noted that at least two, and possibly three, Louisiana mills decided this year to close their doors forever. It is rather alarming to note that the number of Louisiana sugar mills has been reduced by ten during the past ten years.

All of the above were, more or less, in the catagory of the extra-curricula activities which were carried on while the regular work of preparing for wage hearings, price hearings, mill marketing allotment hearings, acreage allotment hearings, freight rate hearings, etc., was moving alon on schedule. That so much was a complished speaks well for efficienc of the employees of the League an the members of the committees wh guided their activities.

When the League was organized i 1922, one of its prime functions wa the protection of our industry agains excessive freight rates. At that tim rail freight rates were our main cor cern but today our Freight Rat Committee not only has to watch ou for adverse rail tariffs, but it als has the job of guarding our industr against unjust barge and truckin rates.

During the past 12 months ther have been numerous proposals t increase or decrease freight rates o sugar and blackstrap molasses t various destinations. Our Freigh Rate Committee, under the able di rection of Herbert Vaccaro, ha vigorously opposed the increases an supported the decreases. Some ver significant decreases in freight rate have resulted, among which is a sub stantial reduction in rail freigh rates on blackstrap molasses shippe to the mid-western states, which ar heavy users of blackstrap molasse for feed.

The League participated as a pro testant in the three-day Freight Rat Hearing held by the Louisiana Publi Service Commission on the applica tion of the railroad to increase th interstate rail rates on all commo dities in Louisiana by 6%. Numerous witnesses appeared on behalf of th League; a brief has been filed an the case is now pending before th Commission.

I am sure that all of you are familiar with the fine work that Joe Ferris has done and is doing for us in Washington. His very fine liaison work during the almost end- less negotiations leading up to the final enactment of the new sugar legislation was of the highest caliber and it is good to know that our af- fairs in Washington are in such cap- able hands.

As time marches on, it is inevitable

nat changes occur, and we have had ur share during the past twelve nonths.

Godchaux Sugars, Inc. is no longer part of the Louisiana sugar industry, which to some of us is an nbelievable development, and also e find it very hard to realize that . G. Lee, Jr., who for so many years ooked after the welfare of Louisiana armers, as Dean of the College of griculture of L. S. U., is no longer ith us. Dean Lee died on April 28, nd all of us lost a real friend.

It is a pleasure, of course, to ironicle the appointment of another ied and true friend, Dr. J. Norman fferson, as the new Dean of the ollege of Agriculture of Louisiana tate University, and also the appointment of Dr. C. W. Upp to succeed Dr. Efferson as Director of the ouisiana State Experiment Station. ouisiana agriculture is indeed fornate that these two highly trained en were available when they were urgently needed.

In closing, I want to say that I am ptimistic about the outlook for the ouisiana sugar industry and the ture of our organization. The merican Sugar Cane League has rned the respect and confidence of ouisiana sugar cane growers and rocessors as evidenced by the fact at 98 per cent of the growers and 0 per cent of the processors are embers of this organization.

With this great spirit of cooperaon in the industry, I am sure we n successfully cope with whatever roblems the future may have in ore for us.

———o———

## P FRONT

(Continued from page 5)

Andrew P. Broussard, Lafayette, 33.3 tons, 116.9 acres; Lawrence Dugas, St. Martin parish, 30.7 tons, 129.8 acres; H. J. Bernard, Cade, 24.8 tons, 294.4 acres.

District 2, St. Mary and Iberia parishes: Voorhies Viator, New Iberia, 49.1 tons, 24 acres; Nicholas Paul, Franklin, 36.1 tons, 98.8 acres; Cremaldi Brothers, Patterson, 30.9 tons, 177.5 acres; Harold Junca, Franklin, 26.7 tons, 306.5 acres; J. Malcolm Duhe, New Iberia, 25.6 tons, 931.4 acres.

District 3, Terrebonne, Lafourche and Assumption parishes: Leon Trahan, Jr., Houma, 52.4 tons, 7.4 acres; August Richard, Thibodaux, 38.2 tons, 53.4 acres; Cox Borthers, Terrebonne parish, 45.6 tons, 113.5 acres; Ruffin Bergeron, Gibson, 34.5 tons, 202.2 acres; J. Wilson Lepine, Thibodeaux, 33.5 tons, 606.6 acres.

District 4, West Baton Rouge, Ascension, St. James, St. John, St. Charles and Iberville parishes: Carlo Pizzolato, Donaldsonville, 44.8 tons, 45.5 acres; Alvin B. Daigle, White Castle, 37.2 tons, 65.3 acres; Webre and Becnel, Edgard, 38.2 tons, 114.2 acres; John Best, Port Allen, 38 tons, 482.4 acres; Horace Wilkinson III, Port Allen, 35.8 tons, 842.8 acres.

District 5, Rapides, Avoyelles, Pointe Coupee, St. Landry and West Feliciana parishes: Edmund Crochet, Lakeland, 40.6 tons, 12.6 acres; J. L. Ernest, Greenwood plantation, Cheneyville, 39.7 tons, 68.3 acres; Lynn Schexnayder, New Roads, 37.45 tons, 198.4 acres; Joseph Beaud, New Roads, 35.18 tons, 260.6 acres; Louisiana state penal farm, Angola, 26.4 tons, 1810.7 acres.

### Cuban Crop Prospects

The following paragraphs are from the USDA Foreign Crop Report.

"Due to a continued scarcity of rain in Cuba, extending over a 2 year period, it is doubtful if there is enough sugarcane in the fields to produce a 1957 sugar crop of much more than 5,679,000 short tons. It is becoming more and more apparent that the situation in the 30 or 40 sugar mills, which could not meet their 1956 sugar quota has worsened, and it is quite likely that an additional number of sugar mills will not be able to meet their sugar quotas in

(Continued on next page)

1957, even on a 5,225,000 short ton crop basis, let alone a 5,679,000 short ton crop which it is now believed the Cuban Government will authorize for 1957."

"Quota releases to Cuba by the International Sugar Council the latter part of July and early part of August give Cuba a quota on the world market of 2,853,000 short tons, of which all but 249,000 short tons are reported to have been sold. The world quota of 2,853,000 short tons, together with Cuba's U. S. and local consumption quotas of 2,969,000 short tons and 341,000 short tons, respectively, gives Cuba an over-all marketing quota of 6,163,000 short tons for the calendar year 1956. Since Cuba's total sugar production for 1956 equaled 5,225,000 short tons, current marketings in 1956 are expected to exceed production by a minimum of 938,000 short tons. As the result of increased marketing quotas in 1956 and firm sales commitments thereon, it is expected Cuba's carry-over on December 31, 1956, will be reduced substantially from the 1,786,000 short tons in stock on December 31, 1955."

"In view of the above it now appears obvious that Cuba will not produce hi-test molasses either before or after the 1957 Cuban sugar crop."

"After completing the lifting of its 235,643 short tons purchase of Cuban sugar, Russia is reliably reported to be negotiating for an additional 144,000 short tons for delivery between August 1956 and February 1957."

"For the first time in history, Cuba has exported yeast for cattle feed. The first shipment was consigned to the United States. The new factory was erected at Cardenas, Cuba, and operates in conjunction with a distillery owned by the Cuban firm Jose Arechabala, S.A."

"Attention is called to the sale of sugar by Cuban interests, some with American connections, to German firms which apparently intended to sell to Red China. Due to prompt action of the authorities in th United States, some of the sales hav or are being canceled, which it is b lieved will act somewhat as a dete rent to future sales at local levels.

### Television

The American Sugar Cane Leagu now has two television personalitie Lloyd L. Lauden made his debut few weeks ago on the early mornin agricultural show via WDSU, an on Thursday, September 27th, Gi bert Durbin appeared on the sam show. Just for the record, we hav both these gentlemen under contrac a fact that we report to discourag any talent scout who may have bee viewing these early morning pr grams.

### Mr. Voorhies Reports

We received another card fro our roving ambassador, Mr. Marc J. Voorhies, last week and this on was mailed in Singapore. Mr. Voo hies must be getting a little homesic because he expresses the hope tha we have had enough rain for the can crop. It is good to know that whil we are thinking of him, he is think ing of us.

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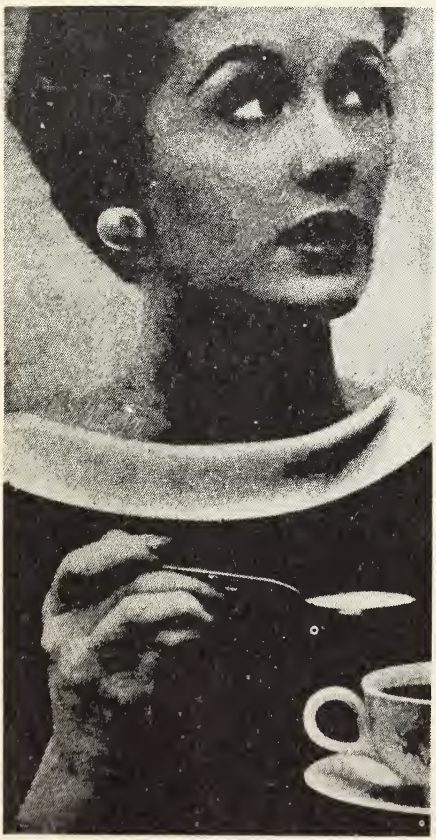
# How many calories in a spoonful of sugar?



200 ☐ 100 ☐ 50 ☐ 18 ☐

Some guess as high as 600, but the right answer is only 18 calories in a level teaspoonful

If you are counting calories, this fact is even more important–

Sugar can help you cut down on the number of calories you eat

*Research findings show how raising your blood sugar level helps keep your appetite–and weight–under control*

This is one of a series of advertisements of Sugar Information Incorporated designed to counteract some of the false propaganda being utilized by anti-sugar groups.

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# THE SUGAR BULLETIN

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Published on the First and Fifteenth of each month
in the interests of the Domestic Sugar Cane Industry

THE
# SUGAR BULLETIN

414 Whitney Bldg., New Orleans 12

Gilbert J. Durbin, Editor — Andrew W. Dykers, Managing Editor

Lloyd L. Lauden, Agronomist and Field Representative

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*We stand for the encouragement of Home Industries as against Foreign Competition*

# IN WASHINGTON WITH JOE FERRIS

*by Josiah Ferris*

## Price for 1956 Crop Sugar Cane

Fair and reasonable prices for the 956 crop of Louisiana sugar cane vere issued by the Department of Agriculture October 11, 1956. The etermination makes no substantial hanges from the 1955 determination. The pricing period for raw sugar vill be for the period October 5, 1956 hrough April 25, 1957. Payments n molasses will be made in amounts qual to the product of 7.3 and one-alf of the average price per gallon f blackstrap molasses in excess of cents. The average price of black-trap molasses shall be either the imple average of the daily prices for he week in which the sugarcane is lelivered, or the simple average f the weekly prices of blackstrap nolasses for the period October 5, 956 through February 28, 1957 as greed upon by the processor and he grower.

The determination provides that he fair price requirements are ap-licable to sugarcane grown for the extraction of sugar, but are not ap-licable to sugarcane grown in excess f the proportionate share for the arm if such sugarcane is marketed r processed for the production of sugar or liquid sugar for livestock feeding or for the production of livestock feed. During the last two or three years substantial quan-ities of non-quota raw sugar have been imported to the United States for use as livestock feed. This sugar has been marketed at price levels substantially below the price levels which prevailed for quota sugars. The use of sugar for livestock feed is a further development to find alternative uses for sugar. The recent amendment to Section 212 of the Sugar Act specifies that the provisions of Title II are not applicable to sugar produced in the United States for this purpose.

In view of the acreage restrictions in effect for the mainland cane areas in recent years, some cane growers are interested in the production of sugar for livestock feed so as to cushion the impact of restrictions whenever it becomes necessary to reduce acreage. For the first time mainland cane area growers are eligible to participate in the market for livestock feed; that market heretofore was open only to foreign producers.

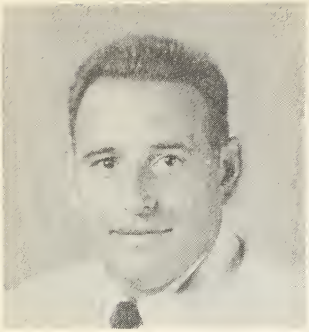
## Hearing for 1957 Sugar Requirements

The U. S. Department of Agriculture will announce a public hearing to be held Novemeber 26, 1956 in Washington, D. C. on sugar requirements for 1957. The hearing will afford all interested persons an opportunity to present data, views or arguments with respect to sugar requirements and the establishment of sugar quotas for the continental United States for the calendar year 1957.

## Hearing to Fix Preliminary 1957 Mill Quotas

The U. S. Department of Agriculture will hold an informal hearing at 11:00 a.m. November 1, 1956 to enable the Sugar Division to allocate

(Continued on page 23)



# IN THE FIELD WITH LLOYD LAUDEN

*by Lloyd L. Lauden*

## Hurricane Flossy and Crop Conditions

Hurricane Flossy on Sunday, September 23, blew through much of Lafourche, Terrebonne, and the lower river parishes and left in her wake many acres of wind-downed cane. Fortunately, there was only very slight damage in other parishes.

From reports and observations heavy stubble cane, in general, seems to have gone down worse, but where winds and rains were most intense both plant and stubble cane appears to have gone down to the same degree.

The high winds had little regard for any specific variety. Many acres of all varieties in the lower Lafourche and Terrebonne area went down. Where the winds were not too severe NCO 310 and C.P. 44-155 seemed to have gone down worse, followed by heavy tonnage fields of C.P. 44-101 and C.P. 36-105.

Cane harvester manufacturers have indicated that many inquiries have come in for the pick-up attachments to the mechanical harvester. Equipment companies have placed rush orders for essential parts for the construction of more pick-up attachments.

Some reports have indicated that some of the cane that was only slightly pushed over will straighten to some extent. In the opinion of the writer, this will be only that cane which was top bent and where the lower part of the stalk was not pushed over. For the cane in which the whole stalk was bent over the top will straighten but the lower stalk will remain in about the same pushed over position. When the tops turn upward, leaving the lower stalk down, this causes many crooked stalks and increases tops and trash delivered to the mills.

Sucrose and purity will be affected to some degree by the lodged cane. Sucrose and purity taken before the hurricane was better than at the same time in 1955 and about equal to the same period in 1954.

Most of the western area was suffering very badly from lack of rainfall until September 30th, when the area received a good gentle all day rainfall. This not only helped the crop to be harvested but helped the recently planted cane and made moisture available for those who had not planted because of lack of moisture. Cane in the western area is shorter, in general, than the rest of the belt as a result of lack of water.

Many farmers who have purchased Heat Treating Units this year have operated on a round-the-clock schedule. Because some growers did not receive their unit until late in the season, operations continued after October 1st in an effort to treat a maximum of cane this year. Results thus far have indicated that treatments after October 1st have materially hurt germination. When told of this, several growers said they were willing to sacrifice stand next year for a supply of clean seed for the 1957 planting. The August and early September heat treated

(Continued on page 23)

# EXTRA PROFITS FROM DELIVERY OF FRESH CANE

*By W. F. Guilbeau, E. E. Coll, and L. F. Martin, Southern Regional Research Laboratory, New Orleans, La.*

There can be no doubt that getting harvested cane to the mill promptly, in the freshest possible condition, will put more dollars in the growers' pockets. The gain demonstrated in six experiments during the 1954 season was checked by eight similar experiments on a practical scale completed in 1955. A glance at the table of price determinations for the average weight and quality of cane in these experiments shows that as much as $15 per acre can be realized by cutting delivery time from 72 to 48 hours, for comparatively fresh cane. The differences shown in the table amount to $134 more per 100 tons for fresh cane compared with the 5-day older cane, and to $156 more per 100 tons compared to the return from cane 7 days older. On an average stand of 25 tons per acre the extra return that would be realized by prompt delivery would be $39 per acre more than for cane delivered 5 days later. This amount is very nearly the same as the gain of $42 per acre for similar stand harvested and held in the field for appoxmately the same length of time in the experiments carried out during the 1954 season. The extra profit is well worth any effort required to conserve the sugar and tonnage that have been built up at harvest time, by burning, loading, and delivering cane as soon as possible after it is cut.

Fresh, hand-cleaned sugarcane that was ground within 24 hours after cutting was shown to be worth $42 per acre more, on the average, than cane left in heap rows for 9 days before grinding in the the pilot plant at the Audubon Factory in experiments carried out during the 1954 season (1, 2). Similar experiments were carried out during the 1955 season on eight separate lots of cane grown at St. Gabriel Plantation. These experiments were planned to be more comparable to current harvest practices. Relatively fresh samples ground on the second and third days were compared with samples taken seven and approximately eleven days after cutting, rather than nine and fourteen day old cane used in the earlier work. Results confirmed fully the additional average extra return of at least $5 per acre that can be realized for every day that is saved in getting harvested cane to the mill. This higher return can be obtained by growers, and equally substantial gains can be realized by the factories from more efficient processing of the higher quality cane. There was marked improvement in commercial handling of cane during the 1955 season, when nearly all mills received fresher cane and were able to obtain satisfactory recoveries of sugar in spite of low purities; further improvement should be made during the season now getting under way.

The eight lots of cane included both plant and stubble of the three new varieties released most recently, and of the most widely grown variety, C. P. 44-101. They are representative of the kind of cane that will be grown and processed commercially for the next 5-10 seasons.

The four lots of stubble cane were cut during the first half of the season up to November 8, and four lots of plant cane were cut during the latter half of the season from November 15 to December 6. Because of the proximity of standing cane, it was possible to clean only one lot of stubble cane and one lot of plant cane by burning. The other lots were not cleaned. A sub-sample of about 150 lbs. was spread between stakes in the heap row to be weighed accurately each time that a 2-ton sample from the lot of cane was

**PRICE DETERMINATION FOR 100 TONS OF SUGARCANE**

(Price of sugar per pound.....$0.060)
(Price of molasses per gal.....$ .100)

| | 2 Days Old | 3 Days Old | 7 Days Old | 11 Days Old |
|---|---|---|---|---|
| Conversion of net sugarcane to standard sugarcane: | | | | |
| Sugarcane | | | | |
| Sucrose in Normal Juice | 10.85 | 10.41 | 10.22 | 10.23 |
| Purity of Normal Juice | 69.2 | 68.0 | 65.4 | 63.84 |
| Sucrose Factor | .870 | .778 | .744 | .746 |
| Purity Factor | .960 | .951 | .913 | .885 |
| Conversion Factor | .8352 | .7399 | .6793 | .6602 |
| Price of Standard Sugarcane per ton | $6.36 | $6.36 | $6.36 | $6.36 |
| Sucrose Value per ton/cane | 5.312 | 4.706 | 4.320 | 4.199 |
| Molasses Value per ton/cane | .144 | .144 | .144 | .144 |
| | $5.456 | $ 4.850 | $4.464 | $ 4.342 |
| Weight of cane | 2000 lb. | 2000 lb. | 1843 lb. | 1791 lb. |
| Value of 100 tons sugarcane | $545.60 | $485.00 | $411.36 | $389.01 |
| Loss per acre of 25 tons cane | -- | $ 15.15 | $ 33.74 | $ 39.15 |

delivered for milling. This provided an approximate measure of the loss in weight of cane in the heap row. The older samples represent delays of five days and about 8 days longer than the minimum time of delivery that is feasible in practice when cane is cleaned by burning. The two bundles of fresh cane from each lot were delivered together to the Audubon Mill on the second day, and one was milled that day, about 48 hours after cutting, while the second was milled the next day, about 72 hours after cutting.

Weather conditions covered the range experienced in an average season. Between 10-15% of the weight was lost in the course of the experiments with all of the lots of unburned cane. This would be expected because of the loss of moisture from adhering leaves. Loss of weight by the burned stubble cane was less for two reasons; there was appreciable loss of weight during burning which is not determined because the subsample was weighed only after burning, therefore less loss could occur subsequently; and the burned samples were free of leafy material that loses weight most rapidly. The drop in purity of cane piled in heap rows is the principal cause of lower recoverable sugar values and smaller payments for the cane.

The 2-ton samples were milled in the Audubon tandem and the juices were clarified continuously on a pilot plant scale by the procedures that have been described previously for the evaluation for milling and processing of different kinds and qualities of cane (3, 4). Factors established for the Audubon Mill were used, together with the actual extraction determined for each sample, as a basis for the recoverable sugar calculations. Details of each of the experiments were published in the Sugar Bulletin (5). Averages of the sucrose, purity and extraction values, and of the weight losses were used to calculate the conversion factors given in the table.

This summarizes what can be expected, on the average, in additional profits from fresher cane.

## Acknowledgment

Cane for the experiments was provided by the American Sugar Cane League under the direction of Mr. Lloyd Lauden. We are particularly indebted to Capt. L. E.

Chambers, whose interest in caring or the cane and supervising determinations of weights and the deliveries from St. Gabriel Plantation assured the success of the work, and o Mr. W. S. Chadwick, of J. Supples ons, for providing scales for weighng the sub-samples. Cane was nilled at the Audubon Sugar Facory under a research contract with ouisiana State University, and the ssistance of Professor Keller and is staff in all phases of the work gratefully acknowledged.

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[1] One of the laboratories of the Southern tilization Research Branch, Agricultural esearch Service, U. S. Department of griculture.

—o—

## N WASHINGTON

(Continued from page 19)

etween 450,000 tons and 500,000 ns of sugar to mainland cane proucers for marketing against 1957 uotas. The formal hearing on mareting allotments for 1957 cannot be eld until late February or early Iarch 1957, therefore, it is necessary or the department to hold the prooosed hearing in order to permit ainland cane mills to sell a portion f their production in the period beween January 1, 1957 and the date f issuance of final 1957 mill quotas. Last year a similar hearing was held and the department authorized the marketing in early 1956 of an amount of sugar equal to 80% of the 1955 quotas.

### Production Report Requested

Thomas H. Allen, Acting Director, Sugar Division, U. S. Department of Agriculture has asked all mainland cane sugar processors who will not be able to fill their quota for 1956 to advise him promptly in regard to any anticipated deficit. Allen said that it would require at least two weeks after quota releases are received in his office before reallotment to other processors can be made effective. The goal of orderly marketing, he said, will be served if the releases are prorated as early as possible to the processors who will have adequate supplies, particularly if the total quantity released by processors unable to fill their quotas, proves to be substantial. Processors were urged to submit to Allen not later than October 12, 1956 current answers to the following questions:

"1. How much of the allotment as determined in SR 814.23, Amendment 2, effective August 15, 1956, do you release for reallotment?

2. How much additional allotment can you utilize in 1956, sufficiently and within the requirement for orderly marketing?"

—o—

## IN THE FIELD

(Continued from page 20)

seed is up to very good stands.

Mr. Russell Ramp, U. S. D. A. Station, Houma, La., has been using the experimental mechanical cane planter at Godchaux Sugars, Raceland, La. this season. Mr. Ridley LeBlanc, Manager, Godchaux Sugars, Raceland, La., who has worked with Mr. Ramp for two seasons on the mechanical planter, reports that much improvement has been made since last year.

Also in the field again this year is the U. S. D. A. top cutter. Mr. Alfred Delaune of Valentine Sugar, who has been cooperating in this work, reports that the top cutter has been made stronger this year and at the time of this writing the cutter is operating satisfactory.

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in the interests of the Domestic Sugar Cane Industry

THE
# SUGAR BULLETIN

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Lloyd L. Lauden, Agronomist and Field Representative

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# UP FRONT WITH THE LEAGUE

*by A. W. Dykers*

### Fair Prices

As recommended by the Grower Processor Committee, the general rules in the 1956 Fair Price Determinations are practically the same as those in effect last season. However, attention is called to the fact that the theoretical production of blackstrap molasses per ton of cane has been increased this year from 7.2 gallons to 7.3 gallons reflecting the most recent 5 year average recovery of blackstrap. We also want to call special attention to the fact that the Determination is not applicable to sugarcane grown in excess of the proportionate share of a farm "if such sugarcane is marketed (or processed) for the production of sugar or liquid sugar for livestock feed or for the production of livestock feed".

This means that Louisiana growers and processors may now harvest and process into sugar or liquid sugar, cane from excess acreage without getting into trouble with the Sugar Division, *provided the resulting sugar or liquid sugar is used for livestock feed.* Heretofore only foreign countries have enjoyed this privilege.

As in the past, excess acreage cane can still be used to make syrup. It is also our understanding that it can also be used to produce "high-test" molasses if no sugar is made in the process. Present prices for blackstrap might cause some factories to investigate the possibility of making "high-test" molasses.

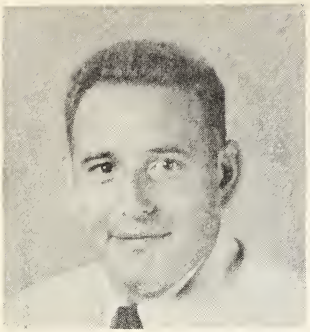
There are, of course, rules and regulations covering the milling of excess acreage cane. Our friends in the Sugar Division, who are very busy these days issuing determinations and increasing quotas, haven't had time as yet to get these rules into print, so we suggest that Mr. Grayson's office be consulted before any excess acreage cane is made into sugar.

### Wages

The following paragraph, taken from the "Statement of Bases And Considerations" which accompanied the wage determination tells how this year's rules differ from those in force last season.

"The determination differs from the wage determination applicable to the harvesting of the 1955 crop and the production and cultivation of sugarcane during the calendar year 1956 in the following respects: (1) wage rates on a time basis for the several classes of workers or operations are increased, on the average, 5 cents per hour; (2) piecework rates for hand harvesting of sugarcane are increased 10 cents per ton; (3) two new large barrel varieties of sugarcane have been designated; (4) the basis for determining the minimum hourly guarantee of earnings for workers employed on piecework is specified as a payroll period; and (5) the determination is made inapplicable with respect to sugarcane grown in excess of the proportionate share of the farm if such sugarcane is marketed or processed for the produc-

(Continued on page 37)



# IN THE FIELD WITH LLOYD LAUDEN

*by Lloyd L. Lauden*

Several promising new unreleased sugar cane varieties were recently transferred to the 51 Secondary Increase Stations located throughout the Louisiana sugar belt. The unreleased varieties transferred are C. P. 48-117, C. P. 52-57, C. P. 52-67, and C. P. 52-68.

These canes were transferred from three regular Primary Increase Stations and one special Increase Station. The experimental work done thus far on these varieties shows that C. P. 52-68 is the sweetest cane of the four. The tests conducted also show that all four varieties have good yielding ability. These four canes were heat treated for control of Stunting Disease before being transferred to the Secondary Increase Stations. The operators of the Stations will do everything in their power to keep the canes clean of the disease.

The variety C. P. 48-117 was transferred only to the Increase Station in the Teche region with the hope that it might have a special adaptation there.

All of the Increase Stations render a very special and valuable service to the sugar industry. In order to show a small portion of the services performed by the three Primary Increase Stations the harvesting of the four canes transferred will be discussed. Because all four varieties had been heat treated the year before and planted two rows in one place and two in another place, with other varieties mixed between, these canes had to be cut by hand knives. In an effort to have the shortest period between the cutting, transferring, and planting of the cane, a force of about 20 hand knives was needed to cut the cane at each place in one day. Another 6 or 8 men were required on the second day at each place for making individual bundles of each variety, and for loading them on the trucks for hauling to the Secondary stations. It is also important to point out that Primary Stations give 20 tons of cane free of charge whenever the canes are transferred and that it is a rare occasion when there are more than 20 tons to be distributed from any one station. Generally the distribution of these canes comes at a time when all labor on the farm is needed for the regular planting operation and this is, in itself, a burden.

The planting of unreleased varieties on Primary Stations requires additional time and expense. Small amounts of cane are sent to them several times in the fall, some during their normal planting time and some during the very busy grinding season. Sometimes 50 stalks of cane of one variety from one plot at L. S. U. or the U. S. D. A. will be given them in early October and later on as the experimental plots are harvested at the U. S. D. A. or L. S. U., more seed of the same variety will be shipped to them for planting. This is done on the most promising canes in order to more rapidly increase the seed for further distribution to the industry.

Much time, effort, and money are given the industry by the Primary

(Continued on page 38)

# IN WASHINGTON WITH JOE FERRIS

*by Josiah Ferris*

### Surprise

Washington representatives of domestic sugar areas are groggy—but not from too much "grog".

Rapid, precedent-breaking quota action by the United States Department of Agriculture officials, who increased the quota 50,000 tons on October 23, 1956 and followed on October 25, 1956 with another 50,000 ton increase, which made the grand total of 8,775,000 tons of sugar available for domestic use in 1956, was bewildering, to say the least.

The first quota hike had been awaited for several weeks, ever since the New York spot price for raws reached 6.25¢, but the almost modest increase of only 50,000 tons when 75,000 to 100,000 tons had been expected, was a surprise. The greatest shock however, came forty-eight hours after the first increase when the department dramatically announced that it had "underestimated" the market and immediately made available a second quota increase of 50,000 tons.

Quick decisions and admission of mistakes by bureaucrats are rare. Our hat is off to the boys in the sugar division.

### Correction

A friend in the Tariff Commission called attention to an error in the column which appeared in the October 15, 1956 issue of the Bulletin. In referring to the use of sugar for live-stock feed, we mentioned that Section 212 of the Sugar Act had been amended — that Section was not amended. The Section of the Act which was amended last year to permit the harvesting and processing of over-quota sugar cane or sugar beets for live-stock feed was Section 301 (b).

### Mr. Sugar

Mr. Ernest W. Greene, who for more than twenty years, until his recent retirement, was Vice President and Washington representative of the Hawaiian Sugar Planters' Association, has been appointed Chairman of a Task Group on sugar. The appointment was made by Mr. J. Leroy Welsh, Chairman of the President's Appointed Bipartisan Commission on Increased Industrial Use of Agricultural Products. The Task Group's assignment will be to suggest proposals upon which the Commission can base its recommendations to Congress. It is understood that the Commission will look to the Task Group for a definitive statement as to research needs, possible economic considerations and whatever else may be useful in eventual legislative deliberations to increase industrial utilization of sugar.

The appointment of Mr. Greene is highly appropriate. He is President of Sugar Association, Inc., and of Sugar Research Foundation, Inc., and Chairman of the Board of Sugar Information, Inc. Henceforth, his friends will address him as "Mr. Sugar."

# 1956 CROP FAIR PRICE DETERMINATION

TITLE 7—AGRICULTURE
Chapter VIII—Commodity Stabilization Service (Sugar) Department of Agriculture
Subchapter I — Determination of Prices
(Sugar Determination 874.9)
PART 874—PRICES: SUGARCANE: LOUISIANA 1956 CROP

Pursuant to the provisions of section 301 (c) (2) of the Sugar Act of 1948, as amended, (herein referred to as "Act"), after investigation, and due consideration of the evidence presented at the public hearing held in Thibodaux, Louisiana, on August 2, 1956, the following determination is hereby issued:

§ 874.9 *Fair and reasonable prices for the 1956 crop of Louisiana sugarcane.* A producer of sugarcane in Louisiana who is also a processor of sugarcane (hereinafter referred to as "processor") shall have paid or contracted to pay, for sugarcane of the 1956 crop grown by other producers and processed by him, in accordance with the following requirements:

(a) *Definitions*: For the purpose of this determination, the term:

(1) "Price of raw sugar" means the price of 96° raw sugar quoted by the Louisiana Sugar Exchange, Inc.; except that if the Director of the Sugar Division determines that such price does not reflect the true market value of sugar, because of inadequate volume, failure to report sales in accordance with the rules of such Exchange or other factors, he may designate the price to be effective under this dteremination, which he determines will reflect the true market value of sugar.

(2) "Price of blackstrap molasses" means the price per gallon of blackstrap molasses quoted by the Louisiana Sugar Exchange, Inc.; except that if the Director of the Sugar Division determines that such price does not reflect the true market value of blackstrap molasses, because of inadequate volume, failure to report sales in accordance with the rules of such Exchange or other factors, he may designate the price to be effective under this determination, which he determines will reflect the true market value of blackstrap molasses.

(3) "Standard sugarcane" means sugarcane, free of trash, containing 12 percent sucrose in the normal juice with a purity of at least 76.00 but not more than 76.49.

(4) "Net sugarcane" means the quantity of sugarcane obtained by deducting the weight of trash from the combined weight of sugarcane and trash delivered by a producer.

(5) "Salvage sugarcane" means sugarcane containing either less than 9.5 percent sucrose in the normal juice or less than 68 purity in the normal juice.

(6) "Trash" means green or dried leaves, loose sugarcane tops, attached sugarcane tops at or above the green leaf roll, dirt and all other extraneous material which is representative of the quantity of sugarcane from which the sample for trash determination is taken.

(b) *Basic Price*:

(1) The basic price for standard sugarcane shall be not less than $1.06 per ton for each one-cent per pound of the average price of raw sugar determined in accordance with whichever of the following periods was used by the processor during the 1955 crop, or the processor may use the alternate period upon approval of the State Office:

(i) The simple average of the daily prices of raw sugar for the week in which the sugarcane is delivered; or

(ii) The simple average of the weekly prices of raw sugar for the period October 5, 1956 through April 25, 1957; *Provided,* That the average price of raw sugar as determined under this subdivision or subdivision (i) of this subparagraph may be reduced by not more than the following:

*(a)* 0.022 cent for all mills except those located in the areas defined in *(b)* and *(c)* below;

*(b)* 0.097 cent for mills located north of Bayou Goula between the Atchafalaya and Mississippi Rivers and southeast of New Iberia west of the Atchafalaya River; or

*(c)* 0.147 cent for mills located north and west of New Iberia west of the Atchafalaya River.

(2) The basic price for salvage sugarcane shall be as agreed upon between the processor and the producer, subject to the approval of the Louisiana State Agricultural Stabilization and Conservation Office (hereinafter referred to as "State Office").

(c) *Conversion of net sugarcane to standard sugarcane.* Net sugarcane (except for salvage sugarcane) shall be converted to standard sugarcane as follows:

(1) By multiplying the quantity of net sugarcane by the applicable quality factor in accordance with the following table:

| Percent sucrose in normal juice of net sugarcane | Standard sugarcane quality factor [1] |
|---|---|
| 9.5 | .60 |
| 10.0 | .70 |
| 10.5 | .80 |
| 11.0 | .90 |
| 11.5 | .95 |
| 12.0 | 1.00 |
| 12.5 | 1.05 |
| 13.0 | 1.10 |
| 13.5 | 1.15 |
| 14.0 | 1.20 |
| 14.5 | 1.25 |

[1] The quality factor for sugarcane of intermediate percentages of sucrose in normal juice shall be interpolated and for sugarcane having more than 14.5 percent sucrose in the normal juice shall be computed in proportion to the immediately preceding interval.

and,

(2) By multiplying the quantity determined pursuant to subparagraph (1) of this paragraph by the applicable purity factor in the accompanying table.

(d) *Molasses payment.* For each ton of net sugarcane (except salvage sugarcane) there shall be paid an amount equal to the product of 7.3 and one-half of the average price per gallon of blackstrap molasses in excess of 6 cents. The average price of blackstrap molasses shall be either the simple average of the daily prices for the week in which the sugarcane is delivered, or the simple average of the weekly prices of blackstrap molasses for the period October 5, 1956 through February 28, 1957, as agreed upon between the processor and the producer.

(e) *General*

(1) The sucrose and purity of the normal juice shall be determined by acceptable methods of analysis on sugarcane as delivered, such methods to be subject to the approval of the State Office.

(2) Because of decreased boiling house efficiency deductions may be made from the payment for frozen sugarcane accepted by the processor provided such deductions are at rates not in excess of 1.5 percent of the payment, computed without regard to the molasses payment, for each 0.1 cc. of acidity above 2.50 cc. of N/10 alkali per 10 cc. of juice but not in excess of 4.75 cc. (intervening fractions are to be computed to the nearest multiple of 0.05 cc.) Frozen sugarcane testing in excess of 4.75 cc. of acidity shall be considered as having no value. Sugarcane shall not be considered as frozen, even after being subjected to freezing temperature, unless and until there is evidence of damage having taken place because of the freeze, such evidence to be certified by the State Office.

(3) In the event a general

(Continued on next page)

freeze causes abnormally low recoveries of raw sugar by a processor in relation to the sucrose and purity tests of sugarcane, payment for such sugarcane may be made as mutually agreed upon between the producer and the processor, subject to approval by the State Office: *Provided,* That the payment for each ton of net sugarcane shall be not less than an amount equal to the total returns from raw sugar and molasses actually recovered from such sugarcane, determined on the basis of the simple average of the weekly price of raw sugar for the period October 5, 1956 through April 25, 1957 and the simple average of the weekly prices of blackstrap molasses for the period October 5, 1956 through February 28, 1957, less an amount not to exceed $3.00 per gross ton of sugarcane for processing and less actual costs of hoisting, field weighing and transporting such sugarcane.

(4) A processor who paid the costs for hoisting and weighing sugarcane of the 1955 crop shall also pay such costs with respect to the 1956 crop; *Provided,* That nothing in this subparagraph shall be construed as prohibiting negotiations with respect to such costs, any change to be approved by the State Office.

(5) A processor who made allowances to producers for delivering sugarcane from the farm to the mill for the 1955 crop, shall also make such allowances for the 1956 crop at rates not less than those which were effective under comparable conditions in 1955.

(6) A processor who made allowances to producers for trans-

| Purity of Normal Juice | | STANDARD SUGARCANE PURITY FACTOR[1] Percent Sucrose in Normal Juice | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | At least 9.50 | 9.70 | 9.90 | 10.10 | 10.30 | 10.50 | 11.00 | 11.50 | 12.00 | 12.50 | 13.00 | 13.50 | 14.00 | 14.50 | 15.00 | 15.50 |
| At Least | But not more than | But not more than 9.69 | 9.89 | 10.09 | 10.29 | 10.49 | 10.99 | 11.49 | 11.99 | 12.49 | 12.99 | 13.49 | 13.99 | 14.49 | 14.99 | 15.49 | 15.99 |
| 68.00 | 68.24 | 1.000 | .989 | .978 | .967 | .956 | .945 | .936 | .929 | .922 | .915 | .908 | .901 | .894 | .887 | .880 | .873 |
| 68.25 | 68.49 | 1.005 | .993 | .982 | .971 | .960 | .949 | .941 | .934 | .927 | .920 | .913 | .906 | .899 | .892 | .885 | .878 |
| 68.50 | 68.74 | 1.010 | .998 | .987 | .976 | .965 | .954 | .945 | .938 | .931 | .924 | .917 | .910 | .904 | .897 | .890 | .884 |
| 68.75 | 68.99 | 1.016 | 1.003 | .992 | .981 | .970 | .959 | .950 | .943 | .936 | .929 | .922 | .915 | .909 | .902 | .896 | .890 |
| 69.00 | 69.49 | 1.021 | 1.009 | .997 | .986 | .975 | .964 | .955 | .948 | .941 | .934 | .927 | .920 | .914 | .908 | .902 | .896 |
| 69.50 | 69.99 | 1.025 | 1.013 | 1.001 | .990 | .979 | .968 | .960 | .953 | .945 | .938 | .931 | .924 | .918 | .912 | .906 | .900 |
| 70.00 | 70.49 | 1.030 | 1.018 | 1.006 | .995 | .984 | .973 | .965 | .958 | .950 | .943 | .936 | .929 | .923 | .917 | .911 | .905 |
| 70.50 | 70.99 | 1.035 | 1.023 | 1.011 | .999 | .988 | .977 | .969 | .962 | .954 | .947 | .940 | .933 | .927 | .921 | .915 | .909 |
| 71.00 | 71.49 | 1.040 | 1.028 | 1.016 | 1.004 | .993 | .982 | .974 | .966 | .959 | .951 | .945 | .938 | .932 | .926 | .920 | .914 |
| 71.50 | 71.99 | 1.045 | 1.033 | 1.021 | 1.009 | .998 | .987 | .978 | .970 | .963 | .955 | .949 | .942 | .936 | .930 | .924 | .918 |
| 72.00 | 72.49 | 1.050 | 1.038 | 1.026 | 1.014 | 1.003 | .992 | .983 | .975 | .967 | .960 | .954 | .947 | .940 | .934 | .928 | .922 |
| 72.50 | 72.99 | 1.055 | 1.043 | 1.031 | 1.019 | 1.007 | .996 | .987 | .979 | .971 | .964 | .958 | .951 | .944 | .938 | .932 | .926 |
| 73.00 | 73.49 | 1.060 | 1.048 | 1.036 | 1.024 | 1.012 | 1.000 | .991 | .984 | .976 | .968 | .962 | .955 | .948 | .942 | .936 | .930 |
| 73.50 | 73.99 | 1.065 | 1.052 | 1.040 | 1.028 | 1.016 | 1.004 | .995 | .988 | .980 | .972 | .966 | .959 | .952 | .946 | .940 | .934 |
| 74.00 | 74.49 | | 1.057 | 1.044 | 1.032 | 1.020 | 1.008 | 1.000 | .992 | .984 | .977 | .970 | .963 | .956 | .950 | .944 | .938 |
| 74.50 | 74.99 | | 1.062 | 1.049 | 1.036 | 1.024 | 1.012 | 1.004 | .996 | .988 | .981 | .974 | .967 | .960 | .954 | .948 | .942 |
| 75.00 | 75.49 | | | 1.054 | 1.041 | 1.028 | 1.016 | 1.008 | 1.000 | .992 | .985 | .978 | .971 | .964 | .958 | .952 | .946 |
| 75.50 | 75.99 | | | 1.059 | 1.046 | 1.033 | 1.020 | 1.011 | 1.004 | .996 | .988 | .981 | .974 | .967 | .961 | .955 | .949 |
| 76.00 | 76.49 | | | | 1.051 | 1.038 | 1.025 | 1.015 | 1.008 | 1.000 | .992 | .985 | .978 | .971 | .965 | .959 | .953 |
| 76.50 | 76.99 | | | | 1.054 | 1.041 | 1.028 | 1.019 | 1.011 | 1.004 | .996 | .989 | .981 | .975 | .969 | .963 | .957 |
| 77.00 | 77.49 | | | | | 1.045 | 1.032 | 1.023 | 1.015 | 1.008 | 1.000 | .993 | .985 | .979 | .973 | .967 | .961 |
| 77.50 | 77.99 | | | | | 1.049 | 1.035 | 1.027 | 1.019 | 1.011 | 1.003 | .996 | .989 | .982 | .976 | .970 | .964 |
| 78.00 | 78.49 | | | | | | 1.039 | 1.031 | 1.023 | 1.015 | 1.007 | 1.000 | .993 | .986 | .980 | .974 | .968 |
| 78.50 | 78.99 | | | | | | 1.042 | 1.035 | 1.026 | 1.018 | 1.010 | 1.003 | .996 | .989 | .983 | .977 | .971 |
| 79.00 | 79.49 | | | | | | | 1.039 | 1.030 | 1.022 | 1.014 | 1.007 | 1.000 | .993 | .987 | .981 | .975 |
| 79.50 | 79.99 | | | | | | | 1.043 | 1.033 | 1.025 | 1.017 | 1.010 | 1.003 | .996 | .990 | .984 | .978 |
| 80.00 | 80.49 | | | | | | | | 1.037 | 1.029 | 1.021 | 1.014 | 1.007 | 1.000 | .994 | .988 | .982 |
| 80.50 | 80.99 | | | | | | | | 1.040 | 1.032 | 1.024 | 1.017 | 1.010 | 1.003 | .997 | .991 | .985 |
| 81.00 | 81.49 | | | | | | | | | 1.036 | 1.028 | 1.021 | 1.014 | 1.006 | 1.000 | .994 | .988 |
| 81.50 | 81.99 | | | | | | | | | 1.039 | 1.032 | 1.024 | 1.017 | 1.009 | 1.003 | .997 | .991 |
| 82.00 | 82.49 | | | | | | | | | | 1.035 | 1.027 | 1.020 | 1.013 | 1.007 | 1.000 | .994 |
| 82.50 | 82.99 | | | | | | | | | | 1.038 | 1.030 | 1.023 | 1.016 | 1.010 | 1.004 | .998 |
| 83.00 | 83.49 | | | | | | | | | | | 1.033 | 1.027 | 1.019 | 1.013 | 1.007 | 1.001 |
| 83.50 | 83.99 | | | | | | | | | | | 1.036 | 1.030 | 1.022 | 1.016 | 1.010 | 1.004 |
| 84.00 | 84.49 | | | | | | | | | | | | 1.033 | 1.025 | 1.019 | 1.013 | 1.007 |
| 84.50 | 84.99 | | | | | | | | | | | | | 1.028 | 1.022 | 1.016 | 1.010 |

[1] Factors applicable to higher sucrose and purity of the normal juice than shown in this table shall be determined by the same method of calculation used to compute the factors specified and shall be furnished by the Louisiana State ASC Office, Alexandria, Louisiana upon request.

# WAGE DETERMINATION FOR HARVESTING 1956 CROP AND CULTIVATION DURING 1957

*(Issued October 16, 1956)*

TITLE 7—AGRICULTURE

Chapter VIII—Commodity Stabilization Service (Sugar) Department of Agriculture

Subchapter H—Determination of Wage Rates

(Sugar Determination 864.4)

Part 864—WAGES; SUGARCANE; LOUISIANA

FAIR AND REASONABLE WAGES; HARVESTING—1956 CROP; PRODUCTION AND CULTIVATION—CALENDAR YEAR 1957

Pursuant to the provisions of Section 301(c)(1) of the Sugar Act of 1948, as amended, (herein referred to as "act"), after investigation, and consideration of the evidence obtained at the public hearing held in Thibodaux, Louisiana, on August 2, 1956, the following determination is hereby issued.

864.4 *Fair and reasonable wage rates for persons employed in Louisiana in the harvesting of the 1956 crop of sugarcane and production and cultivation of sugarcane during the calendar year 1957.* (a) *Requirements.* A producer of sugarcane in Louisiana shall be deemed to have complied with the wage provisions of the act if all persons employed on the farm in the harvesting of the 1956 crop of sugarcane and the production and cultivation of sugarcane during the calendar year 1957 shall have been paid in accordance with the following:

(1) *Wage Rates.* All such persons shall have been paid in full for all such work and shall have been

(Continued on next page)

porting sugarcane from the customary delivery points to the mill for the 1955 crop, shall also make such allowances for the 1956 crop; *Provided,* That nothing in this subparagraph shall be construed as requiring the processor to make allowances to producers in excess of the actual costs or rates charged by a commercial carrier for the customary method of transportation; *Provided further,* That where the only available practicable means of transportation is by railroad and the distance to the nearest mill is in excess of 50 miles or where, because of unusual circumstances, the cost of transportating sugarcane is in excess of customary allowances, such costs may be shared by the processor and the producer by agreement, subject to the approval of the State Office.

(7) If a processor and the producers delivering sugarcane to such processor mutually agree upon a plan for improving harvesting and delivery operations, there may be deducted from the price per ton of sugarcane an amount equal to one-half of the cost of such plan. Such deduction may not be made until the plan has been approved by the State Office.

(8) The requirements of this section are applicable to all sugarcane grown by a producer and processed by the processor for the extraction of sugar or liquid sugar, *Provided,* That such requirements shall not apply with respect to sugarcane grown on acreage in excess of the proportionate share for the farm if such sugarcane is marketed (or processed) for the production of sugar or liquid sugar for livestock feed or for the production of livestock feed.

(9) The processor shall not reduce the returns to the producer below those determined herein through any subterfuge or device whatsoever.

as agreed upon between the producer and the worker, but not less than the rates specified below. Wage rates applicable to the harvesting of the 1956 crop shall be effective on the date of publication of this section in the Federal Register and wage rates applicable to production and cultivation of sugarcane during the calendar year 1957 shall be effective on January 1, 1957.

(i) *For work performed on a time or piecework basis:*

| Class of Worker or Operation Harvest of 1956 Crop | Rate Per Hour |
|---|---|
| Cutters, toppers, strippers, scrappers | $ .53 |
| Loaders, spotters, ropemen, grabmen | .61 |
| Cutters and loaders, pilers, hoist operators | .55 |
| Tractor drivers, and truck drivers | .64 |
| Teamsters | .61 |
| Operators of mechanical loading or harvesting equipment | .70 |
| All other harvesting workers | .50 |

| Cutting top and bottom: | Rate Per Ton |
|---|---|
| Large barrel varieties [1] | $1.10 |
| Small barrel varieties [2] | 1.30 |

| Production and Cultivation, calendar year 1957 | Rate Per Hour |
|---|---|
| Tractor drivers | $ .55 |
| All other production and cultivation workers | .44 |

(ii) *Workers between 14 and 16 years of age when employed on a time basis.* For workers between 14 and 16 years of age, the wage rate per hour (maximum employment of 8 hours per day for such workers without deduction from Sugar Act payments to the producer) shall be not less than three-fourths of the applicable hourly wage rate for adults provided under subdivision (i) of this subparagraph.

(iii) *Other piecework rates.* The piecework rate for any operation specified in subdivision (i) of this subparagraph, when performed on a unit basis other than a ton, or the piecework rate for any operation not specified shall be that as agreed upon between the producer and the worker: *Provided,* That the hourly rate of earnings of each worker employed on piecework during each pay period (such pay period not to be in excess of two weeks), shall average for the time worked at piecework rates during such pay period not less than the applicable hourly rate prescribed in subdivisions (i) and (ii) of this subparagraph.

(2) *Compensable working time.* For work performed under subparagraph (1) of this paragraph, compensable working time includes all time which the worker spends in the performance of his duties except time taken out for meals during the work day. Compensable working time commences at the time the worker is required to start work and ends upon completion of work in the field. However, if the producer requires the operator of mechanical equipment, driver of animals, or any other class of worker to report to a place other than the field, such as an assembly point, tractor shed, etc., located on the farm, time spent in transit to and from the field is compensable working time. Any time spent in performing work directly related to the principal work performed by the worker, such as serpaid wages in cash therefor at rates vicing equipment, is compensable working time. Any time spent in performing work directly related to the principal work performed by the worker, such as servicing equipment, is compensable working time. Time of the worker while being transported from a central recruiting point or labor camp to the farm is not compensable working time.

(3) *Equipment necessary to perform work assignment.* The producer shall furnish without cost to the worker and equipment required in the performance of any work assignment. However, the worker may be charged for the cost of such equipment in the event of its loss or de-

struction through negligence of the worker. Equipment includes, but is not limited to, hand and mechanical tools and special wearing apparel, such as boots and raincoats, required to discharge the work assignment.

(b) *Applicability.* The requirements of this section are applicable to all persons employed on the farm in the production, cultivation, or harvesting of sugarcane grown on the farm for the extraction of sugar or liquid sugar, *Provided,* That such requirements shall not apply to any person engaged in such work with respect to sugarcane grown on acreage in excess of the proportionate share for the farm, which is marketed (or processed) for the production of sugar or liquid sugar for livestock feed or for the production of livestock feed, if the producer furnishes to the appropriate Agricultural Stabilization and Conservation county committee acceptable and adequate proof which satisfies the committee that the work performed was related solely to such sugarcane.

(c) *Subterfuge.* The producer shall not reduce the wage rates to workers below those determined herein through any subterfuge or device whatsoever.

(d) *Claim for unpaid wages.* Any person who believes he has not been paid in accordance with this determination may file a wage claim with the local county Agricultural Stabilization and Conservation office against the producer on whose farm the work was performed. Detailed instructions and wage claim forms are available at that office. Such claim must be filed within two years from the date the work with respect to which the claim is made was performed. Upon receipt of a wage claim the county office shall thereupon notify the producer against whom the claim is made concerning the representation made by the worker. The county ASC office shall conduct such investigation as it deems necessary. The producer and worker shall be notified in writing of the recommendation of the County ASC Committee for settlement of the claim. If either party is not satisfied with the recommended settlement, an appeal may be made to the State Agricultural Stabilization and Conservation Office, 1517 Sixth Street, Alexandria, Louisiana, which shall likewise consider the facts. The producer and worker shall be notified in writing of the recommendation of the State ASC Committee for settlement of the claim. If the recommendation of the State ASC Committee is not acceptable, either party may file an appeal with the Director of the Sugar Division, Commodity Stabilization Service, U. S. Department of Agriculture, Washington 25, D.C. All such appeals shall be filed within 15 days after receipt of the recommended settlement from the respective committee, otherwise such recommended settlement will be applied in making payments under the act. If a claim is appealed to the Director of the Sugar Division, his decision shall be binding on all parties insofar as payments under the act are concerned.

---

[1] Large barrel varieties: Co. 290; C. P. 29/103; C. P. 29/116; C. P. 32/243; C. P. 36/13; C. P. 36/105; C. P. 29/120; C. P. 43/47; C. P. 44/101; C. P. 44/155; N. Co. 310; C. P. 47/193; and C. P. 48/103.

[2] Small barrel varieties: All other.

## WEEKLY AVERAGE PRICES

The weekly average prices issued by the Louisiana Sugar Exchange since the start of the 1956-57 pricing period have been as follows:

Week ending October 11, 1956
Raws 6.15, Blackstrap 21.20

Week ending October 18, 1956
Raws 6.17, Blackstrap 22.00

Week ending October 25, 1956
Raws 6.24, Blackstrap 23.30

# SUGAR QUOTAS INCREASED TO 8,775,000 TONS

*(Official Release )*

The U. S. Department of Agriculture announced on October 25th a further increase of 50,000 tons in the total sugar quotas for the continental United States for 1956. With this increase the 1956 quotas total 8,775,000 short tons, raw value. The action increases the quotas for the Domestic Beet Sugar Area 11,227 tons, the Mainland Cane Sugar Area 3,456 tons, Hawaii 6,265 tons, Puerto Rico 6,552 tons, Cuba 21,600 tons, and "full-duty" countries 900 tons. These increases reflect proration to the other domestic areas of an additional deficit in the quota for the Virgin Islands amounting to 89 tons, the quantity by which this quota is otherwise increased by this action.

The action also increases the quantities that may be brought in as direct-consumption sugar by 175 tons for Hawaii and 762 tons for Puerto Rico.

The announced increase was based on the following "Statement of Bases and considerations":

*"Requirements.* On October 23, 1956 an increase of 50,000 short tons, raw value, in sugar requirements was announced. This brought the total to 8,725,000 tons. Although this total provided a limited quantity for inventory adjustments associated with the changing pattern of distribution and an unsettled shipping situation, the quantities needed for such purposes appear to have been underestimated. After the close of the Exchange on October 24, the 'spot' price of raw sugar, duty paid, New York, advanced from 6.25 cents per pound to 6.4 cents per pound and a sale was reported at 6.50 after the close of the market. It also appears that very little raw sugar available to East Coast refiners remains unsold, leaving a significant unfilled demand for sugar needed by certain refineries for November and December. For these reasons a further increase is needed at this time.

"Accordingly, requirements for the year are further increased herein by 50,000 tons to a total of 8,775,000 tons."

The revised quotas and prorations adjusted for the Virgin Islands deficit, which will be effective when Amendment 7 to S. R. 811 is published in the Federal Register, are as follows:

| | Revised quotas and prorations (short tons, raw value) |
|---|---|
| Domestic beet sugar | 1,904,878 |
| Mainland cane sugar | 586,150 |
| Hawaii | 1,063,107 |
| Puerto Rico | 1,111,615 |
| Virgin Islands | 12,000 |
| Republic of the Philippines | 980,000 |
| Cuba | 2,992,560 |
| Dominican Republic | 36,139 |
| El Salvador | ..... |
| Haiti | 3,498 |
| Mexico | 14,984 |
| Nicaragua | 4,530 |
| Peru | 59,305 |
| Unspecified countries | 6,234 |
| Total | 8,775,000 |

The revised quantities that may be brought in for direct consumption are as follows:

| | Short tons, raw value |
|---|---|
| Hawaii | 29,908 |
| Puerto Rico | 129,635 |
| Republic of the Philippines | 59,920 |
| Cuba | 375,000 |
| Other foreign countries | 42,395 |

# SUGAR REFINERS AUTHORIZED TO PROCESS OVER-QUOTA SUGAR

*(Official Release)*

On October 26th the U. S. Department of Agriculture issued a notice permitting sugar refiners to bring in or import sugar into the continental United States during the remainder of 1956 in excess of 1956 quotas provided it is held for distribution within 1957 quotas. Sugar brought in pursuant to this notice must be returned to Customs' custody within one month after entry of such sugar unless it is brought in after December 1—that is, less than a month before the opening of the new quota year.

Because of the uncertainties in the supply situation, this action is necessary to provide sugar supplies to refiners and consumers in all areas in an orderly manner, a USDA spokesman explained.

## SUGAR MARKET STATISTICS THROUGH OCT. 25, 1956

| | Today | 1 Month Ago | 1 Year Ago |
|---|---|---|---|
| QUOTA RAWS DELIVERED NEW YORK | 6.50 | 6.10 | 6.05 |
| QUOTA RAWS DELIVERED NEW ORLEANS | 6.42 | 6.04 | 5.96 |
| WORLD SPOT RAWS (In Cuba) | 3.24 | 3.23 | 3.26 |

**SUGAR FUTURES No. 6**
**(Closing Bid Prices)**

| | Mar. | May | July |
|---|---|---|---|
| Today | 5.57 | 5.59 | 5.64 |
| 1 Month Ago | 5.44 | 5.47 | 5.52 |
| 1 Year Ago | 5.36 | 5.43 | 5.51 |

**OFFSHORE RECEIPTS AT NEW ORLEANS**
**(Long Tons, 2,240 lbs.)**

| | To Date 1956 | Same Date 1955 |
|---|---|---|
| American | 353,098 tons | 378,768 tons |
| National (Godchaux) | 208,068 tons | 166,571 tons |
| Colonial | 142,838 tons | 116,152 tons |
| Henderson | 97,191 tons | 92,425 tons |
| Southdown | 39,952 tons | 25,289 tons |
| South Coast | 68,561 tons | 52,179 tons |
| Supreme | 103,391 tons | 102,632 tons |
| Totals | 1,013,099 tons | 934,016 tons |

## UP FRONT

(Continued from page 27)

ion of sugar or liquid sugar for ivestock feed or for the production f livestock feed."

### The Old Mule

Regardless of what happens to ur favorite quadruped from here n out, his magnificent display of tamina during the past few days as earned him a place in the Old Mule Hall of Fame. The way he ept going despite the desperate actics employed to break his spirit must have made every other mule in the world proud to be a mule. We salute him.

Eventually, of course, the driver is sure to win this struggle for supremacy but, as we have observed before, it isn't as easy as it used to be to control the Old Mule. Here is a play by play description of the past few days.

For sometime prior to this report rumors had been heard that the folks in Washington thought 6.25 was high

(Continued on next page)

enough for sugar. Sure enough, when the spot price of raws in New York advanced on October 23rd from 6.25 to 6.35 on a sale of 3,000 tons of Philippine raws, the Sugar Division immediately upped quotas by 50,000 tons. The next sale was at 6.40 and then on the 24th a New York refiner bought a cargo of Cubas at 6.50. On the 25th the Sugar Division increased quotas another 50,000 tons bringing the total consumption estimate for 1956 to 8,775,000 tons but on October 26th the New York spot price was still 6.50.

On October 26th the Sugar Division announced that it would permit the melting of over-quota foreign raws by the refiners in this country with the understanding, of course, that the resulting refined sugar could not be sold until after the first of the year. It is too bad that we must go to press before the results of this latest move are known. It is noted, however, that the future market opened two points advanced to unchanged on October 29th.

**STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946**

**(Title 39, United States Code, Section 233)**

Of The Sugar Bulletin, published semi-monthly at New Orleans, La., for October 1, 1956, State of Louisiana, Parish of Orleans.

Before me, a Notary Public in and for the State and parish aforesaid, personally appeared Gilbert J. Durbin, who, having been duly sworn the Editor of the Sugar Bulletin and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Acts of March 3, 1933, and July 2, 1946, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit.

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, The American Sugar Cane League of the U. S. A., Inc., New Orleans, La.; Editor, Gilbert J. Durbin, New Orleans, La.; Managing Editor, Andrew W. Dykers; Business Manager, none.

2. That the owner is the American Sugar Cane League of the U. S. A., Inc., New Orleans, La.; F. A. Graugnard, Jr., St. James, La., President; Ed. Schexnayder, White Castle, La., Vice President; J. J. Shaffer, Houma, La., Secretary; T. M. Barker, Lockport, La., Treasurer.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are none.

GILBERT J. DURBIN,
Editor.

Sworn to and subscribed before me this 27th day of September, 1956.

BRITTMAR P. LANDRY,
Notary Public.

(Seal)

(My commission expires at death.)

## James Graugnard Appointed

Mr. John B. Levert, President of the Louisiana Sugar Exchange, has announced the appointment of Mr. James Graugnard, of St. James, La., as a member of the sugar quotation committee of the Exchange. Mr. Graugnard will represent the cane farmers on this important committee.

## No Increases In Freight Rates

There will be no increase in rail freight rates on sugar cane, raw sugar, blackstrap molasses, and bagasse for the present at least. This good news was received today (October 29th) when your League was advised that the Louisiana Public Service Commission had refused to allow the railroads a 6 per cent increase in rates at this time on these commodities. This is a victory for our side.

—o—

## IN THE FIELD

(Continued from page 28)

Stations.

The writer wishes to thank Mr. Louis Arceneaux, Manager, Mr. L. P. Boudreaux, Overseer, and the owners of Smithfield Plantation of Milliken & Farwell, Inc., for the excellent cooperation given in the recent transfer of unreleased canes.

Thanks and appreciation are also extended to Mr. Elliott Jones, Mr. William McCollum, Mr. G. W. Broussard, Mr. Prosper J. Toups and the owners of Southdown Sugars for their contributions and cooperation in transferring the Primary Station canes.

Duhe Brothers' Hope Plantation a Primary Station operated by Mr. Malcolm Duhe and brothers with Mr. Arthur Belanger as Overseer, is also thanked for the time, effort, excellent cooperation, and cane given in the recent transfer of unreleased canes.

To Mr. John Smith, Field Manager, Mr. Jesse Breaux, Overseer

Mr. Donaldson Caffery, and Mr. Clegg Caffery of Katy Plantation, the industry owes a vote of thanks for all the help and cooperation they gave in increasing and distributing the Primary Station canes.

The Louisiana Sugar Industry is fortunate to have members who give of their time, effort, and money so generously.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# THE SUGAR BULLETIN

. 35 — No. 4 NOVEMBER 15, 195

*cial Bulletin of the American Sugar Cane League of the U. S. A*

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Published on the First and Fifteenth of each month
in the interests of the Domestic Sugar Cane Industry

THE
# SUGAR BULLETIN

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Gilbert J. Durbin, Editor — Andrew W. Dykers, Managing Editor

Lloyd L. Lauden, Agronomist and Field Representative

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# UP FRONT WITH THE LEAGUE

*by A. W. Dykers*

### The Markets

As everybody in the cane growing and sugar selling business knows, the Sugar Division has succeeded in curbing the Old Mule. The feat was accomplished by allowing the refiners to purchase and melt over-quota offshore raws; a development which ended their year end carry-over problems and almost immediately placed 1956 and 1957 quota raws on about the same f o o t i n g. The market dropped from 6.50 to 6.27 three days after the over-quota announcement.

The record shows, of course, that the Sugar Division tried to reduce prices in what might be called the "conventional manner" before resorting to the use of over-quota sugars but since their object was to break the market, this really doesn't matter. The Old Mule was scheduled to be clobbered, regardless.

### The Outlook

It has always been our contention that the Sugar Act was intended to completely d i v o r c e the Domestic sugar market from the World sugar market but the Head of the Sugar Division has indicated on numerous occasions that he does not subscribe to this theory. Apparently he feels that it is impossible for the Domestic market to ignore the World market and has enumerable charts and statistics to back up his contention. For the record we would like to point out, however, that Mr. Myers controls the Domestic price of sugar and therefore controls the lines on his charts.

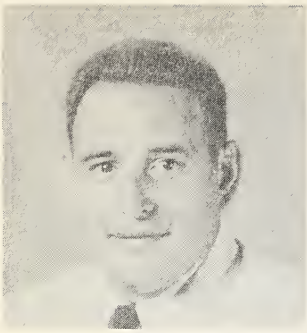
We believe that the motivating force back of Mr. Myers price theory is the belief that he would place himself in an untenable position with certain powerful interests in this country if he allowed the Domestic price of sugar to reach the levels indicated in the Sugar Act while the world price of sugar is so low.

With this thought in mind we call attention to the report on the situation in Puerto Rico appearing on page 47 of this issue and also quote the following about Cuba from the November Issue of "The Guarantee Survey", a publication of the Guarantee Trust Company of New York.

"Probably the realization that Cuba's sugar surplus is swiftly disappearing as 1956 draws to a close has been a major factor influencing the business outlook. Sugar exports during the first seven months of this year totalled 3.3 million tons, or 18 per cent more than in the corresponding period of 1955. Sales to foreign markets slowed somewhat in August, but prospects for a relatively smaller carryover at the end of the year remained excellent."

"Drought is affecting next year's sugar prospects. Some sugar mills, as a matter of fact, have reported that cane supplies for 1957 might not be sufficient to fill their quotas. But this news has only bolstered optimism, since it is a further indication that the threat of overproduction may be receding, at least for the time being. Prices for sugar in both the United States and world markets have been slightly higher on year-to-year comparisons."

From these reports it will be seen that Mr. Myers may soon have to find another reason for his low price policy.



# IN THE FIELD WITH LLOYD LAUDEN

*by Lloyd L. Lauden*

## New Cane Hauling Equipment

A new time, labor, and money saving method of handling harvested cane in the field and at the mill has been developed by Mr. Ridley LeBlanc, Manager of the Gulf States Land & Industries, Inc., properties at Raceland, La. Mr. C. A. Wainwright, Engineer, Raceland mill, and Mr. Russell Ramp, U.S.D.A., worked with Mr. LeBlanc in designing and developing the new cane handling system which is being used for both wagon and truck delivered administration cane and also for some truck delivered shippers' cane.

The method of handling wagon delivered administration cane utilizes the same basic equipment used throughout the belt with certain modifications. Thirty-two administration cane wagons have been modified by adding about two feet to the height of each wagon. Four chains have been attached or fixed to the right side of the wagons. The chains are laced together at several places to form a chain mat. The four chains are allowed to slack along the bottom of the wagon and up and over the left side in the conventional manner. Instead of having sling locks or dogs, all four chains have been attached to a bar or pipe resting on a rack which is about one foot from the top on the outside of the left side of the wagon.

Cane is loaded into these wagons in the field in the conventional manner but there are no slings to be locked or tightened. When the wagons reach the mill either a drag line or an engine driven hoist grabs the pipe bar on the left side of the wagon. (Picture #1) As the bar is lifted the cane is dumped into a pit on the right side of the wagon. (Picture #2) It takes from 12 to 20 seconds to make the grab, lift, and dump the load. This is done by one man, the operator of the hoist.

The saving accomplished by this method is considerable. Slings do not have to be tied in the field and they do not have to be hooked, unsnapped, and unhooked at the hoist. The handling of the slings in an out of wagons is completely eliminated. Scrapping on headlands and roads is eliminated because of the high sides of the wagons. Elimination of sling repairs and the replacing of lost and worn out slings is, in itself, a large saving.

The method of handling truck delivered cane differs from wagon delivered cane in that the cane is dumped from three compartments on a trailer without the use of slings or chains.

These compartments are 12 feet long, 7 feet wide and 8 feet high and are hinged on the right side to the bed of a flat bodied trailer. The right side of each compartment is a door and is hinged at the top of the compartment. Cane is placed in the compartments without slings. To unload, a hoist line at the mill tilts the compartment and the door on the right side of the compartment opens from the bottom and the cane slides out into a pit. Some difficulty has been experienced with the cane catching at the top when the load

**Picture No. 1**

**Picture No. 2**

slides out. This, however, is being remedied by hinging higher at each end of the door. (Editor's note—We are sorry that the pictures of this operation are not clear enough to print.)

As in the case of the wagons, this method eliminates hooking, unsnapping, and unhooking slings, and slings are completely eliminated on the mill yard. In addition to the saving in time, and labor, the trucks are also hauling a maximum allowable highway load in a much neater package.

At present cane is being delivered by the new trucks only from the Elm Hall and Waterford plantations.

The trucks and trailers are being supplied under contract by Perret

(Continued on page 47)

# IN WASHINGTON WITH JOE FERRIS

*by Josiah Ferris*

### Sugar Task Group Meets

The first meeting of the Sugar Task Group appointed by the President's Commission on Increased Industrial Uses of Agricultural Products, was held in Washington, D. C., November 2, 1956. At that meeting plans were made for obtaining the thinking of sugar industry leaders on ways to widen uses of sugar cane and sugar beets.

The task of the 12-member committee under the chairmanship of Mr. Ernest W. Greene is to find new and expanded non-food, non-feed uses for sugar and the by-products, such as molasses, bagasse and sugar beet pulp.

Sub-groups were formed to deal with research, commercial, legislative and economic aspects of the problem. Those groups will collect and organize material to be developed at the second meeting of the Sugar Task Group, November 16, 1956 in Washington, D. C.

In addition to Chairman Ernest W. Greene, President, Sugar Association, Inc., and chairman of the board of Sugar Research Foundation, Inc., other members of the group attending were: H. Malcolm Baldridge, vice-president and counsel, U. S. Cane Sugar Refiners Association, Washington, D. C.; Harry Clark, chairman, Beet Sugar Industry Policy Committee, Greeley, Colorado; Josiah Ferris, Jr., vice-president, American Sugar Cane League, Washington, D. C.; Edwin H. Hungerford, director of research and chemical control, Great Western Sugar Company, Denver, Colorado; Victor L. Johnson, vice-president, American Sugar Refining Company, New York, N. Y.; Dr. John Hickson, assistant scientific director, Sugar Research Foundation, Inc., New York, N. Y.; Dr. George O. Kohler, Head, Field Crops Utilization Section, Western Utilization Research Branch, Albany, California; Slator M. Miller, vice-president, Hawaiian Sugar Planters' Association, Washington, D. C.; Dr. George P. Meade, Gramercy, Louisiana; Robert H. Shields, president and counsel, U. S. Beet Sugar Association, Washington, D. C.; and Dudley Smith, vice-president, Puerto Rican Sugar Producers' Association, Washington, D. C.

### 1957 Marketing Hearing

The 1957 sugar marketing quota hearing for the mainland cane area was held in Washington, D. C., November 1, 1956. The hearing was held for the purpose of receiving evidence with respect to the allotment for a portion of the 1957 sugar quota for the mainland cane area.

The government witness Herbert G. Folken, Chief, "Quota and Allotment Branch" Sugar Division, proposed that the Secretary of Agriculture allot 450,000 short tons, raw value, of the 1957 sugar quota for the mainland cane sugar area for the period January 1, 1957 to the date allotments of the entire quota for the calendar year are established. Initial allotments are to be made on the basis of the allotments of the mainland cane sugar area quota for 1956, established in Sugar Regula-

# NO RESTRICTIONS ON 1957 PUERTO RICAN CANE PRODUCTION

The U. S. Department of Agriculture announced on November 1 that no restrictions will be imposed on marketings on sugarcane from the 1956-57 crop in Puerto Rico. The action was taken through the department's determination of proportionate shares for sugarcane farms in Puerto Rico for the 1956-57 crop.

In announcing the decision to permit the marketing of all of the sugarcane on each farm for the 1956-57 crop, the department considered the following factors.

1. The carryover of sugar in Puerto Rico on January 1, 1956, totaled about 130,000 tons. This carryover is only one-half as large as when restrictions on marketings of sugarcane were made effective in 1952-53.

2. Recent amendments to the sugar act providing that domestic sugar-producing areas will share in the growth in United States sugar consumption above 8,350,000 tons have resulted in an increase in Puerto Rico's 1956 mainland quota to 1,111,615 tons. Prior to these amendments, the island's mainland quota was 1,080,000 tons.

3. Production from the most recent crop (1955-56) was about 60,000 tons less than the sum of the 1956 mainland and local consumption quotas.

4. Assuming that marketings in 1956 will equal the sum of the mainland and local quotas, the carryover into 1957 will be about 70,000 tons. A carryover of this size may be considered somewhat below normal in view of probable marketing outlets and other contingent requirements in 1957.

5. The hurricane which struck Puerto Rico on August 12 of this year caused appreciable damage to the sugarcane crop which is to be harvested in 1957. Damage to the sugarcane crop is now estimated to total between 70,000 and 90,000 tons of sugar.

6. It is estimated that production would not exceed 1,200,000 tons of sugar if all the sugarcane in the fields for harvest in 1957 were processed into sugar.

---

tion 814.23, Amendment 2, published in the Federal Register August 15, 1956.

According to Mr. Folken, initial allotments, higher than 450,000 short tons would involve some risk that certain processors might market a larger quantity under initial allotments than might be found to be their fair, efficient and equitable final allotments.

Josiah Ferris who appeared in behalf of the processors of the mainland cane area said—"Mainland cane processors make no objection to the Government's proposal for allotting a portion of the quota for 1957, provided the formal hearing on marketing allotments is held as early as practicable in 1957. It is hoped that the department will have the hearing in mid-February or early March and that the final allotment order will be issued prior to May 1, 1957.

I desire to call the department's attention to the fact that it appears at this time one or more of the Louisiana processors who were allottees under the 1956 Marketing Allotment Order for the mainland cane sugar area may not produce or have available for marketing any sugar during the year 1957.

I am unable to make any positive representation of fact as to such processors. For this reason, I desire to reserve, on behalf of all interested persons, the right to present evidence pertaining to this matter at any reopening of this hearing or at any subsequent hearing relating to the allotment of the 1957 quota for the mainland cane sugar area."

—o—

## IN THE FIELD

(Continued from page 45)

Brothers, Inc., of New Orleans, La. The compartments can be removed after the harvesting season, leaving

a flat bodied utility trailer for other uses.

Gulf States (Raceland) now has ten trailers and six trucks in use on this new system.

Mr. LeBlanc invites anyone who is interested in converting to this method to visit the fields and the mill yard at Raceland and see the equipment in operation.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in the interests of the Domestic Sugar Cane Industry

THE
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Lloyd L. Lauden, Agronomist and Field Representative

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# UP FRONT WITH THE LEAGUE

*by A. W. Dykers*

**Quotas Increase 100,000 tons**

The U.S.D.A. announced a further quota increase on November 20th of 100,000 tons, bringing the total over-all quota for 1956 to 8,875,000 tons of sugar, raw value. The Mainland Cane Area's share of this latest increase amounted to 6,909 tons, and this brings the Louisiana and Florida total for 1956 to 593,059 tons. We print below two paragraphs from the U.S.D.A.'s official explanation of the quota increase:

"On October 25, 1956, total quotas (the annual sugar requirements) were increased to 8,775,000 short tons, raw value, for the current calendar year. On October 26 refiners were authorized to import over-quota sugar for refining. Under stable conditions these actions should have made sufficient sugar available for meeting requirements for the remainder of the year."

"Several recent developments make it desirable to make additional supplies available. First, the longshoremen's strike has resulted in an increased demand. Regardless of how quickly the strike may be settled, it is evident that larger quantities will be held in inventories and will not be available to meet current market and consumption requirements. Second, the demand for ocean shipping space has increased with the result that cargo ships have become less readily available and ocean freight rates have increased. Third, sugar prices in the world market have risen sharply in the past two weeks. This has reduced the margin between domestic and world prices, which will tend to reduce the pressure to sell into the United States quota market. Finally, domestic new-crop futures have risen to the level of the current "spot" price quotation. It is evident, therefore, that the current "spot" price rests on a broader basis than the size of the quota for the remainder of this calendar year."

***Flash!***

The news is received, just as we go to press, that the Sugar Division has increased quotas another 125,000 tons bringing the overall quota to the almost fantastic total of 9,000,000 tons of sugar, raw value.

**Southern Farm Forum**

Our good friend, Ralph R. Brown, Secretary of the Southern Farm Forum, County Agent for Orleans Parish, and agricultural export of the New Orleans Chamber of Commerce, has advised us that the 10th annual Southern Farm Forum will be held at the Roosevelt Hotel in New Orleans on Thursday and Friday, January 24 and 25, 1957.

The general theme for the Farm Forum will be "Does Federal Policy Shackle Southern Farmers?".

Outstanding agriculturists and farm leaders from throughout the South will discuss many of the current important agricultural problems at the Forum. There will be a panel Thursday afternoon, January 24, on the topic "Soil Bank: Good or Bad ". The panel Friday morning, January 25, will be on "More or Less Subsidy of the Family Farm?".

The Reynolds Metals Company will sponsor the luncheon on Friday, January 25, at which time they will have an outstanding agriculturist to address the group.

# IN THE FIELD WITH LLOYD LAUDEN

*by Lloyd L. Lauden*

## Louisiana Cane Breeding Conference

Each year in the early fall several members of the industry meet with the scientists of the United States Department of Agriculture and the Louisiana State Experiment Station to discuss the coming sugar cane breeding season. This year the meeting was held on the L. S. U. campus in the Pathology Department.

In addition to the scientists stationed at L. S. U., Houma, and the Southern Regional Laboratory, Dr. H. M. Tysdal, Head of the Sugar Crops Section, U. S. D. A. Beltsville, Md., and Mr. Carl O. Grassl of the Canal Point, Florida Sugar Cane Breeding Station attended the conference.

New sugar cane varieties for Louisiana are now bred both at Canal Point, Fla., and at Baton Rouge, La. Until Dr. S. J. P. Chilton and associates of the Pathology Department, L. S. U., developed a method of inducing canes to flower in Louisiana, all crosses were made at Canal Point, Florida. The true seed, each the size of a small ant, was then shipped to L. S. U. and Houma for planting. Now the true seed produced at Canal Point and at Baton Rouge are divided and shared by L. S. U. and Houma.

The purpose of the meeting is to review the past cane breeding season, analyze the crosses made and the canes selected from them, and plan and discuss the canes to be used as parents for the coming season.

The making of true sugar cane seed is a task that requires much more than only planting the varieties to be crossed. The problems and factors which the plant breeder must contend with are many. There is always the possibility that some of the varieties intended to be crossed will not flower naturally and methods of inducing flowering also occasionally fail. Many times a cross cannot be made because the two parents flower at different times. Occasionally germination is poor in some of the crosses. There are many other things, not considering adverse weather conditions, that make cane breeding a highly specialized science. However, a well planned program operates successfully in spite of the many problems as evidenced by the fact that 75,000 new separate and distinct varieties are planted at the two stations each year. It is important to mention that were it not for the cane breeding program the Louisiana sugar industry would probably not be in existence today.

Mr. Grassl told the conference of the new and improved facilities at the Canal Point Station. In addition to a new greenhouse, the Station has increased the number of cane breeding chambers. Air conditioning has been installed in the photoperiod houses to counteract the heat generated by the artificial lights used for part of the light period experiment.

Both Stations decided that some bunch planting of seedlings would be done this coming year. The bunch method of planting seedlings is being done advantageously in other parts of the sugar world. It is merely the

(Continued on page 59)

# IN WASHINGTON WITH JOE FERRIS

*by Josiah Ferris*

## 1957 Sugar Requirement Hearing

The hearing on 1957 sugar requirements, held in Washington, November 26, 1956, provided the usual field day for representatives of the sugar industry and industrial users of sugar. But the hearing was quite different from previous hearings in several respects; first, it was held in the U. S. Departmental Auditorium instead of in the Department of Agriculture; second, the microphone used by witnesses required the user to keep his finger on the switch all the time he was talking which was a serious handicap to many veteran witnesses who talk with their hands as well as with their tongues.

Another departure from the routine of former years was inaugurated by presiding officer Lawrence Myers when he called Dr. Arturo Mañas and Mr. Lawrence A. Crosby, Cuba sugar representatives to testify at the beginning of the hearing instead of at the end. Messrs. Mañas and Crosby after somewhat breathlessly expressing surprise at the order of their appearance proceeded to recommend a quota of approximately 9 million tons for 1957. They also revealed a new affinity for industrial user groups.

Still another radical departure from previous years was the extemporaneous testimony of Robert H. Shields, President and General Counsel, U. S. Beet Sugar Association who heretofore presented a well prepared statement from a manuscript. Mr. Shields did an unusually good job of complimenting the presiding officers and members of the panel for their administration of the Sugar Act during the past year. From Mr. Shields' remarks we gathered that everything Messrs. Myers and company had done in 1956 suited him to a "T".

Mr. Richard W. Blake, Executive Secretary of the National Beet Growers Federation presented a brief but forceful statement in which he called attention to the "cost-price squeeze" which adversely affected beet growers of western states. Mr. Blake accused Louisiana refiners of starting a sugar-price war with beet processors in the upper Mississippi River Valley.

Dr. J. Norman Efferson, Dean of the College of Agriculture, Louisiana State University, very ably presented the cost-price case for Louisiana processors and cane growers. Dr. Efferson enjoyed complete immunity from questions by spokesmen for industrial user interests who heckled several beet-grower witnesses.

Mr. Dudley Smith, Vice President, Puerto Rican Sugar Producers Association, according to Lowry & Company's reporter,—"presented one of the most carefully prepared and elaborately reasoned briefs ever submitted at a quota hearing". Mr. Smith made a splendid exposé of allegations by industrial users that the recent amendments to the Sugar Act were responsible for an "unwarranted, unfair and unreasonable high price of sugar during the past year."

(Continued on page 59)

# STATEMENT FOR 1957 CONSUMPTION REQUIREMENTS HEARING, BY JOSIAH FERRIS U.S.D.A.

*(November 26, 1956)*

*Mr. Presiding Officer and Members of the Hearing Panel:*

My name is Josiah Ferris. I am Vice President of the American Sugar Cane League of the U. S. A., a non-profit association organized for the purpose of preserving the welfare of producers and processors of sugar cane operating in the State of Louisiana. In that capacity I appear today as spokesman for all of the 50 processing mills operating in the State of Louisiana and sugar cane growers who produce more than 95% of the sugar cane produced for sugar in the State of Louisiana.

The producers and processors I represent are vitally interested in the Secretary's estimate of consumption requirements in the continental United States, for they must supply a portion of these requirements and must exist on the market thus afforded and on the price which admittedly is controlled through the Secretary's consumption estimates.

The objective of these hearings each year is to provide a supply of sugar that will be consumed at prices which will not be excessive to consumers and which will fairly and equitably maintain and protect the welfare of the domestic sugar industry. In making this determination of consumption requirements the Secretary is required by mandate, clearly expressed in Section 201 of the Sugar Act, to take into consideration the relationship between wholesale refined sugar prices which would result from such determination and the general cost of living as compared with the relationship between wholesale refined sugar prices and the general cost of living during 1947-49, as indicated by the Consumers' Price Index.

The facts clearly indicate that through consumption estimates in the past the Secretary has accomplished only one of the stated objectives, that is, the price of sugar has not been excessive. In fact the price has been maintained at an unreasonably low level when viewed on the basis of any reasonable relationship with pertinent factors. As we have stated at prior hearings, the resultant prices have not been sufficient to fairly and equitably maintain the welfare of the domestic sugar industry. The industry's welfare can and should be maintained through an estimate which would give proper consideration to the relationship between the wholesale prices of refined sugar and the general cost of living during the 1947-49 base period, as required under the Sugar Act.

We need not offer proof of the inadequacy of the prices of sugar. This is conclusively established through the tables and graphs published by the Department of Agriculture in Sugar Reports No. 54 of October 1956.

We desire to point out these data published by the Department in all instances reflect New York wholesale refined sugar prices. However, it is generally known that frequently the level of sugar prices in the United States as a whole is substantially less than the New York prices.

The most significant of these data compiled and published by the Department are reflected in Table II. This table clearly demonstrates that the price of sugar since the enactment of the Sugar Act of 1948 has been maintained, consistently and at all times, substantially below the level necessary to meet the cost of living relationship prescribed in Section 201 of the Act. Fluctuations must be expected in the price. However, if proper consideration were given to the relationship contained in the Sugar Act, the fluctuations should be above and below the prescribed standard. The maintenance of ab-

(Continued on page 62)

# A MONUMENT DESERVED FOR A MONUMENTAL ACHIEVEMENT

*By Dr. Wm. L. Owen*

*(A monument should be erected honoring a monumental achievement in the survival and prosperity of the Louisiana Sugar Industry and in recognition of its pioneers and its leaders)*

To one who has witnessed the changes and the alternating periods of prosperity and calamity of the membership of the Louisiana Sugar Industry during the past fifty years, the almost reverential esteem that one nurtures for the industry becomes almost an obsession. When one remembers as does the writer those dark days of depression caused by floods and freezes, by surplusages and by economic discrimination, by encroachments of alien sweets upon the Nation's daily diet; when one remembers the disasters of hurricanes and drought; of plant pests and diseases; of the costly results to the industry from short-sighted tariff strategems, one wonders how the industry has survived and prospered. On almost every Louisiana Sugar Plantation there could well and accurately be placed a marker memorializing a battle fought against Nature's onslaughts in flood or freezes, against tariff, or tornadoes, against pests and parasites. The long and noble history of the industry, its trials and tribulations, its victories and its strategic withdrawals from overwhelming odds has never as yet and probably will never be expressed more forcibly nor more impressively than in that illustrious address given by the late Dr. C. A. Browne, whose scientific contributions to the industry have been of incomparably valuable. In his address before the Sixth Congress of International Sugar Technologists at its meeting in Baton Rouge, this illustrious and at one time member of our Sugar Experiment Station Staff, proclaimed in his memorable historical sketch of the development of the Louisiana Sugar Cane Industry, the following:

> "The history of our domestic cane industry is for this reason a frequent record of calamities which would give the reader a most depressing picture were it not for the fact that the somber tints of misfortune are offset by the brighter colors of victories over disaster. The story is therefore not one of defeat. It is rather an inspiring chronicle that assumes at times the grandeur of a national epic."

and he gives as a preliminary this Jeremiad of a series of disasters—such as:

> "Probably no large agricultural industry of the continental United States is more subject to the uncertainties of fortune than that of the sugar cane. Since the first establishment of the sugar cane industry along the northern coast of the Mexican Gulf it has had to run a constant gamut of adversities; at one time from frosts, floods or tornadoes; at another time from insects or cane disease and still another time from unfavorable trade and economic conditions."

Upon reading the history of the industry, one wonders what obsession it is that makes these heroes battle it out over flood and famine, over freezes and frosts, year after year, generation after generation. There must be easier ways to make a fortune; there must be business careers less risky; there must be investments that yield more certain dividends.

The truth is that to follow the fortunes and the vicissitudes of the Louisiana Sugar Industry is a "Way of Life." It is not a commonplace

(Continued on page 60)

# REFINED SUGAR PRICING SYSTEM

*(Taken from the November "Sugar Report" of the USDA.)*

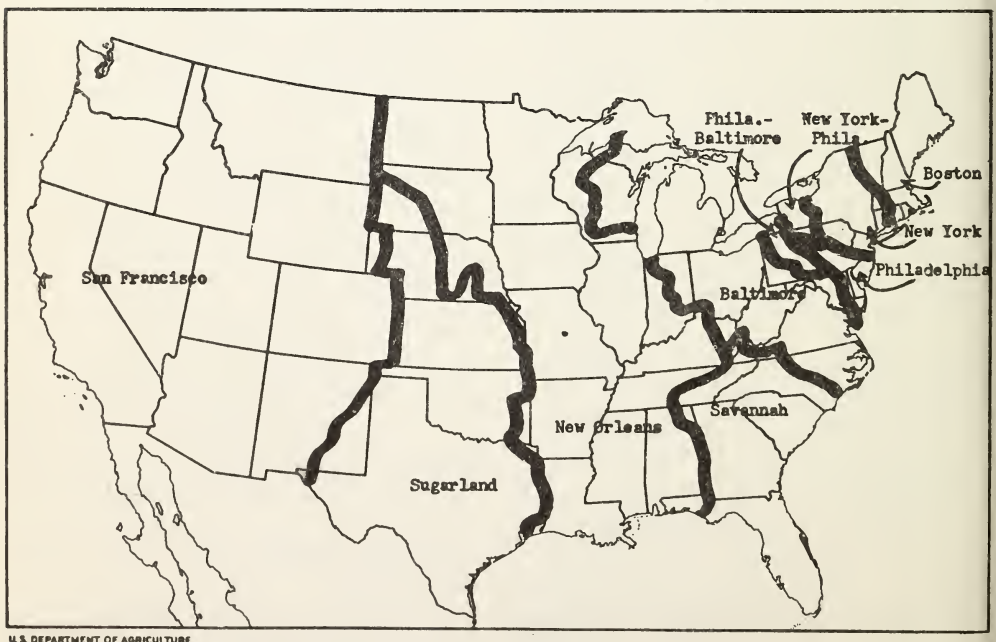
The basis price for sugar is quoted so frequently that it sometimes is confused with actual delivered prices by those not familiar with the pricing system. For instance, the present quoted wholesale price of cane sugar at New York City is $8.95 per 100 pound bag, as compared to a quotation since November 14 of $8.50 at Chicago. However, it should be noted that the buyer in Chicago must pay approximately 64 cents freight whereas sugar would be available at a New York refinery at the $8.95 price.

Wholesale refined sugar prices are quoted on the basing point system, (Figure 1), the base points being the seaboard cane sugar refining cities of Boston, New York, Philadelphia, Baltimore, New Orleans, Sugar Land (Texas), and San Francisco. The delivered price of sugar at any point other than the base points includes not only the "basis price" but also a "prepay" or freight charge. This prepay charge does not in all instances represent actual freight cost to the seller since it is calculated on the basis of freight from the seaboard cane sugar refinery nearest to the point of delivery regardless of the actual point of shipment. The actual freight billing includes not only the freight rate but a 3 percent Federal transportation tax, 1 percent for tare, and an offsetting allowance for the usual 2 percent cash discount.

Over the years, competitive factors including the varying freight costs from points of production have

BASING POINT ZONES FOR SUGAR 1/

Based on Lowest All Rail, Ocean-Rail, and Barge-Rail Rates




U.S. DEPARTMENT OF AGRICULTURE

1/ Zones are approximate and subject to continuing change.

FIGURE 1

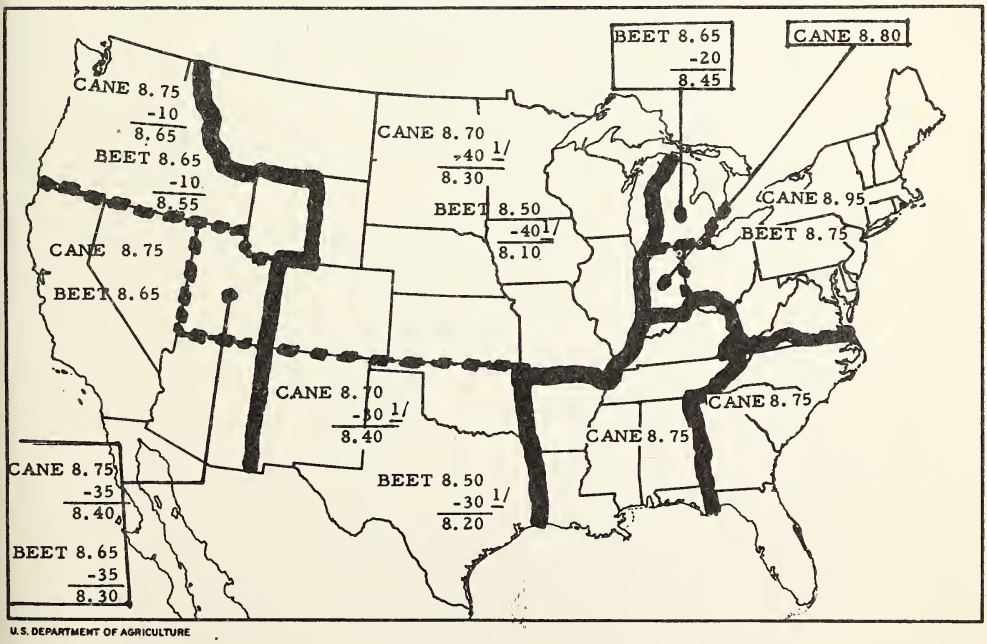
brought about differing basis prices in various parts of the country. The pricing territories (Figure 2) are generally known as the Northeast, Southeast, Gulf, Chicago-West and Pacific but the boundaries vary at times depending upon the pressure of supplies. As an example, cane sugar basis prices in Indiana presently are $8.75 and $8.80 whereas normally this state (east of Gary) is included in the Northeast price zone where quotations are now $8.95. It should also be noted that at present there are several different prices within some territories due to special allowances. Within the Pacific territory, beet sugar basis is quoted net at $8.30 in Utah $8.55 in Washington, Idaho, Oregon, and Western Wyoming and $8.65 in the balance of the territory. Beet sugar processors price their sugar 20 cents below the cane sugar price in all territories in which they market except the Pacific territory where the differential is 10 cents.

Table 1 shows the makeup of the wholesale delivered price of cane and beet sugar in several cities, the actual freight rates and the rolled back price to Gulf and Pacific cane refiners and western beet processors at several production points. Sugar from the points of production shown customarily moves in considerable quantity into the Chicago area but not usually to the other cities. However, under prices that prevailed from November 1 through November 13 it would appear that sugar from these points could have moved to some eastern cities more favorably pricewise than to the Chicago area. A twenty cent increase in sugar prices in the Chicago-West territory announced to be effective

(Table 1 on next page)

QUOTED WHOLESALE PRICES OF REFINED SUGAR AND ALLOWANCES, NOVEMBER 1-13, 1956

(Dollars per 100 pound paper bag)




1/ Effective November 14, allowances reduced 20 cents.

FIGURE 2

as of November 14 would curtail the eastern movement of sugar from inland production points. However, sugar is still being delivered in the Chicago territory at the lower price.

Obviously, factors other than temporary price differentials, influence refiners' and beet processors' decisions as to where they market their sugar. They have regular brokers and customers in their normal marketing territories and customarily maintain supplies sufficient to service their needs.

Table 1.-Wholesale refined sugar prices at specified cities and rolled back prices to points of production

Dollars per 100 pound paper bag

| | City | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Chicago,Ill. | | Toledo,Ohio | | Pittsburgh,Pa. | | Buffalo,NY. | | Rochester,NY. | | Chicago,Ill.* | |
| | cane | beet | cane | beet | cane | beet | cane | beet | cane | beet | cane | beet |
| | November 1 to 13, 1956 | | | | | | | | | | since Nov.14,1956 | |
| A. Delivered price | | | | | | | | | | | | |
| 1. Basis price | 8.70 | 8.50 | 8.95 | 8.75 | 8.95 | 8.75 | 8.95 | 8.75 | 8.95 | 8.75 | 8.70 | 8.50 |
| 2. Allowance | .40 | .40 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .20 | .20 |
| 3. Basis price minus allowance | 8.30 | 8.10 | 8.95 | 8.75 | 8.95 | 8.75 | 8.95 | 8.75 | 8.95 | 8.75 | 8.50 | 8.30 |
| 4. Freight billing rate | .64 | .64 | .72 | .72 | .39 | .39 | .42 | .42 | .45 | .45 | .64 | .64 |
| 5. Gross delivered price | 8.94 | 8.74 | 9.67 | 9.47 | 9.34 | 9.14 | 9.37 | 9.17 | 9.40 | 9.20 | 9.14 | 8.94 |
| 6 Net delivered price (Line 5 minus 2%) | 8.76 | 8.56 | 9.48 | 9.28 | 9.16 | 8.96 | 9.19 | 8.99 | 9.21 | 9.01 | 8.95 | 8.76 |
| B. Actual freight cost including 3 percent tax, rail transport, from | | | | | | | | | | | | |
| 1. San Francisco,Calif. | 1.14 | 1.14 | 1.43 | 1.43 | 1.53 | 1.53 | 1.54 | 1.54 | 1.57 | 1.57 | 1.14 | 1.14 |
| 2. Greeley, Colo. | | .85 | | 1.14 | | 1.24 | | 1.25 | | 1.51 | | .85 |
| 3. Twin Falls, Idaho | | .96 | | 1.25 | | 1.34 | | 1.35 | | 1.57 | | .96 |
| 4. New Orleans, La. | .83<br>.38 1/ | | .97 | | 1.18 | | 1.18 | | 1.22 | | .83<br>.38 1/ | |
| C. Rolled back price (net delivered price minus actual freight) at | | | | | | | | | | | | |
| 1. San Francisco,Calif. | 7.62 | 7.42 | 8.05 | 7.85 | 7.63 | 7.43 | 7.65 | 7.45 | 7.64 | 7.44 | 7.81 | 7.62 |
| 2. Greeley, Colo. | | 7.71 | | 8.14 | | 7.72 | | 7.74 | | 7.50 | | 7.91 |
| 3. Twin Falls, Idaho | | 7.60 | | 8.03 | | 7.62 | | 7.64 | | 7.44 | | 7.80 |
| 4. New Orleans, La. | 7.93<br>8.37 1/ | | 8.51 | | 7.98 | | 8.01 | | 7.99 | | 8.12<br>8.57 1/ | |

[1] Barge Transport.

## IN THE FIELD

(Continued from page 52)

planting of more than one seedling, sometimes as many as 10, in one spot with the idea that the strongest or the best seedling will show its superiority above the others in the same bunch. The important aspect of bunch planting is that the total number of seedlings that can be put on an acre of land is tremendously increased.

Both Stations agreed that in the future much emphasis would be placed on crossing varieties of high sugar content with other varieties that also have a high sugar content. In the past seedlings showing vigor have been much more plentiful than high sucrose seedlings. It is believed that crosses of parents having high sugar will yield a greater number of seedlings having high sugar and, since vigor is always fairly easy to find, it is hoped that some of these seedlings will also have vigor.

———o———

## IN WASHINGTON

(Continued from page 53)

For the first time in the history of consumption requirement hearings the Hawaiian Sugar Planters Association did not have a witness. Slator Miller, Washington representative of the association was in Hawaii.

The usual parade of industrial user witnesses damned the Sugar Act from A to Z and blamed it for all their trials, troubles and tribulations. Their testimony was liberally interspersed with ardent and almost affectionate references to their sugar friends in Cuba.

The highlight of the hearing however, was the by-play between Frank Kemp, President of the Great Western Sugar Company, veteran of many sugar battles during the past twenty-five years, and Robert C. Hibben, Executive Secretary, International Association of Ice Cream Manufacturers. Hibben was most outspoken in his criticism of the recent amendments to the Sugar Act and vociferously resented the claims of sugar witnesses that the present price of sugar would not fairly and equitably maintain the domestic sugar industry. Mr. Kemp, in rare form, proceeded to throw such a heavy verbal barrage of facts and figures to prove that the sugar industry was suffering acutely from low prices and high costs, that Hr. Hibben was temporarily silenced. When Kemp paused for breath Hibben finally got his finger back on the trigger of his microphone and allowed that he was a long-time stockholder in Mr. Kemp's company which had never passed a dividend. This didn't phase Kemp however, who ended with the parting shot that if Hibben had his way there would be no more dividends from Great Western or any other sugar company.

At 5:25 p.m. the industrial users apparently ran out of witnesses and the presiding officer adjourned the hearing.

———o———

## WEEKLY AVERAGE PRICES

The weekly average prices issued by the Louisiana Sugar Exchange since the start of the 1956-57 pricing period have been as follows:

Week ending October 11, 1956
Raws 6.15, Blackstrap 21.20
Week ending October 18, 1956
Raws 6.17, Blackstrap 22.00
Week ending October 25, 1956
Raws 6.24, Blackstrap 23.30
Week ending November 1, 1956
Raws 6.40, Blackstrap 23.96
Week ending November 8, 1956
Raws 6.225, Blackstrap 24.00
Week ending November 15, 1956
Raws 6.18, Blackstrap 24.75
Week ending November 22, 1956
Raws 6.17, Blackstrap 25.42
Week ending November 29, 1956
Raws 6.29, Blackstrap 27.00
Season's Average Through November 29, 1956
Raws 6.228, Blackstrap 23.954

## SUGAR MARKET STATISTICS THROUGH NOV. 26, 1956

| | Today | 1 Month Ago | 1 Year Ago |
|---|---|---|---|
| QUOTA RAWS DELIVERED NEW YORK | 6.27 | 6.50 | 6.00 |
| QUOTA RAWS DELIVERED NEW ORLEANS | 6.17 | 6.42 | 5.92 |
| WORLD SPOT RAWS (In Cuba) | 4.40 | 3.24 | 3.14 |

SUGAR FUTURES No. 6
(Closing Bid Prices)

| | Mar. | May | July |
|---|---|---|---|
| Today | 5.89 | 5.85 | 5.90 |
| 1 Month Ago | 5.57 | 5.59 | 5.64 |
| 1 Year Ago | 5.34 | 5.40 | 5.49 |

OFFSHORE RECEIPTS AT NEW ORLEANS
(Long Tons, 2,240 lbs.)

| | To Date 1956 | Same Date 1955 |
|---|---|---|
| American | 365,818 tons | 384,989 tons |
| National (Godchaux) | 208,068 tons | 209,721 tons |
| Colonial | 148,557 tons | 150,108 tons |
| Henderson | 98,685 tons | 70,877 tons |
| Southdown | 39,952 tons | 13,039 tons |
| South Coast | 68,561 tons | 70,852 tons |
| Supreme | 106,127 tons | 101,578 tons |
| Totals | 1,035,768 tons | 1,001,164 tons |

## A MONUMENT

(Continued from page 55)

means of making one's living or in amassing a fortune. To accept the role of either the plantation owner and operator or as both a grower and a processor of sugar cane in Louisiana is a challenge of the highest qualities of the moral and patriotic elements in one's character and one's temperament. It calls forth the patience of Job, the courage of a David, the persistence of the widow in the parable of the unjust Judges in the New Testament, and the patroitism of a zealot. For be it remembered that Louisiana grown sugar has more than once come to our aid when we were isolated from all sources of this commodity from abroad, and in almost every year it bridges the gap between the end of the "Off Shore Imports" and the incoming Western Domestic Beet crop.

One is often led to wonder what makes the Louisiana Sugar Producer "tick," or why does anyone choose this very worthy but precarious business as a means of livelihood, and an authentic answer can only come from those who rate as members of this great fraternity. But choose it they do for one can number among those now engaged in it a third generation, and a few whose forebears have followed the same vocation here in Louisiana since Etienne de Boré first pioneered the domestic recovery of sugar from the sugar cane in 1795. The truth is there is an appeal to it; a romance surrounding it, that makes it one of the most romantic adventures in the realm of agricultural pursuits and one that can rarely be equalled. The thrill of the spectacle of waving cane over vast expanses of fertile fields; of the harvesting time, when in the frosty autumn air there is the sound of loading cranes and creaking trucks, and rolling cars carrying the precious burden to the factories. And at the factories there is that never to be forgotten aroma of freshly crushed cane and the appetizing fragrance from the evaporators as the liquors are being reduced to crystallizing densities. What nostalgic memories it brings to the older generation to drive from New Orleans to Baton Rouge and look out upon areas that once were dominated

by Sugar Factories that have long since been abandoned in the wake of the very pressing economic need of centralization of sugar manufacture in Louisiana. There was a time when factory after factory could be seen in that area between the two cities and now how few are left? Battle Markers might well be placed where there once so proudly wafted the smoke of industry from their stacks, for there were battles both economic and physical that caused them to yield to progress and to Nature's powers of floods, frosts and freezes.

But following the vicissitudes of conflicts against all of these afflictions tended and still tends to make out of the Louisiana Sugar producer a man of giant stature; a man hardened to adversity; modest in affluence, and patient in panic, and a patriot regardless of economic injustice; a man who sees the needs of his industry for his Parish, his State, and also his Nation; and a man who shares the hopes of all those who are dependent upon him that some day within the scope of their sojourn here on earth there may come real and lasting prosperity to their industry, and that other smokestacks of progress may rise where the ruins of those of former years have crumbled and a lasting period of prosperity may arrive for those who have so long merited and deserved it.

But the hero of the former economic wars is now disturbed by the sound of distant drums, and unless all signs fail, he is soon to match economic swords against an even more relentless foe than frost, famine, flood and freeze, for the cherished lands upon which he and his forefathers have sacrificed "Blood Sweat and Tears" to bring forth bountiful harvests of cane are now being besieged by the onslaught of fresh water perishing industries that see in the fertile delta of the Mississippi River the ideal and permanent Paradise for their water hungry factories. Like the crevasses in the river levee that begin slowly and gradually gain momentum until a flood breaks through the dykes, so are these preliminary encroachments upon our river lands, which may soon lead into an exodus from the North and West into our Garden of Eden along the fertile lands of our river and our bayous. The battle when it comes will be a silent one, fought with legal pen and legal documents; there will be no guns, no forcible invasions, merely the resistance of the ideals on the one hand of those endeared by centuries of tradition, to the landscape of waving cane, and the temptation of fabulous prices for these acreages.

The war will be waged not only along the River but also along our Bayous, where fresh water and water transportation by boat and barge are both available, for this country is faced with a scarcity of water, that no one would have dreamed of occurring within this century, and Industry is making frantic efforts to close in on all accessible vantage points where they can be assured of adequate amounts of fresh water for a reasonably long time, and the Delta of the Mississippi is the Mecca for them all. Will the prices offered for these sites lure these Sugar Planters from their beloved plantations and their factories? There is no telling what fabulous prices may yet be offered, but let us pray that Southern Louisiana, may ever wave as its banner the proud and stalwart stalks of our best known Cane varieties, and that the smoke of our sugar factories may never grow dim, nor their furnaces rust from disuse. For not only is this a great "Way of Life" but it takes care of lands that can never be as profitably used otherwise for agricultural purposes, and a native population that can only be supported by this majestic industry.

---

*Editor's Note:*

Despite the trials and tribulations so eloquently described by Dr. Owen, it is well worth noting that in 1955, under drastic acreage restrictions

imposed by the Government, the Louisiana Sugar Industry produced 455,209 short tons of sugar, raw value, with only 52 sugar mills in operation. Compare that record with the following report by A. Boucherau in the Louisiana Sugar Report on the 1911 crop, which was an outstanding crop for that period:

"The 170 sugar houses (the refineries in the city not included) using the vacuum-strike-pan produced 702,577,966 pounds of sugar, or 313,650 long tons, and 33,021,-164 gallons of molasses, being 4,132,812 pounds of sugar or 1,845 long tons, and 194,242 gallons of molasses per sugar house; while the 16 sugar houses using the other processes produced 10,-096,317 pounds of sugar, or 4,508 long tons, 1,192,675 gallons of molasses, or an average of 631,019 pounds ofsugar or 281 long tons, and 74,542 gallons of molasses per sugar house. The total production for the State was 712,674,283 pounds, or 318,158 long tons of sugar, and 34,213.839 gallons of molasses."

———o———

## STATEMENT

(Continued from page 54)

solute consistency in prices below this standard necessarily indicates a disregard for and lack of consideration to the statutory price relationship.

Even more disconcerting and serious than a disregard for the statutory relationship is the apparent feeling of the Department that the price of sugar should not reach the goal provided by that relationship. This statement is made in view of the increase in the Secretary's estimate whenever it has appeared that the price may approach that level. To illustrate, we refer to the several increases in the consumption estimate during recent weeks, the most recent being the 100,000 ton increase of November 20, 1956.

It is our further opinion the Secretary has not maintained the primary objective provided in the Sugar Act, which is to fairly and equitably maintain and protect the welfare of the domestic sugar industry as a whole. With respect to the Louisiana producers and processors here represented by me, we are prepared today to support this opinion with facts. We have requested Dr. J. Norman Efferson, an internationally known agricultural economist, who is now Dean of the College of Agriculture of the Louisiana State University, to present for the record of this hearing the economic status of the Louisiana sugar cane industry. The facts with reference to which Dr. Efferson will testify clearly indicate this segment of the domestic sugar industry is not being fairly and equitably maintained.

We shall not recommend a particular price objective, for such objective has been clearly and adequately provided by the Congress of the United States. Further, we shall not recommend any particular figure as a proper estimate of 1957 consumption requirements. The Department of Agriculture is better qualified than we are to estimate a quantity which will accomplish the statutory objective and also maintain the price in line with the cost of living relationship provided in the Act.

We do strongly recommend, as we have at prior hearings, that the Department more diligently attempt to accomplish the clearly stated objective of these proceedings and to give proper consideration to the maintenance of an adequate price for sugar. We further recommend that the Department announce a conservative estimate for the year 1957 at the earliest possible date, and in making the announcement also state that the estimate will not be increased until circumstances conclusively demonstrate that the market of the continental United States will absorb additional sugar at fair prices.

I now request that Dr. Efferson be permitted to testify at this time.

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Published on the First and Fifteenth of each month
in the interests of the Domestic Sugar Cane Industry

THE
# SUGAR BULLETIN

414 Whitney Bldg., New Orleans 12

Gilbert J. Durbin, Editor — Andrew W. Dykers, Managing Editor

Lloyd L. Lauden, Agronomist and Field Representative

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# UP FRONT WITH THE LEAGUE

*by A. W. Dykers*

### Season's Greetings

Well, here we are again at the end of another year. This is the last 1956 issue of The Sugar Bulletin and it is time for everybody everywhere to wish his friends and neighbors a Merry Christmas and a Happy New Year.

So, friends and neighbors, we hope that you will have a very Merry Christmas and a Happy New Year, and, while we are about it, let's wish the Old Mule a Happy New Year too. He is liable to need it.

### 9,000,000 tons!

When the Sugar Division announced the 125,000 ton quota increase on November 30th, which brought the total over-all 1956 quota to 9,000,000 tons, it was an amazing development. Everybody knew, of course, that the extra sugar was not needed for eating purposes. The Sugar Division admits this in its official release which is printed on page 69 of this issue.

The attitude of the Sugar Division towards a simple rise in the price of sugar continues to confound us because it is so grossly unfair. We cannot understand how anyone can think that the sugar people should be the only segment of our economy to continue to operate on a pre-inflation income when everything they have to buy is selling at inflated prices.

We realize, of course, that sugar is the one commodity that can be controlled without too much trouble, but this business of waging a one man battle against inflation using our commodity as the scape goat, should be stopped.

The administrator of the Sugar Act seem to panic when the price of sugar goes up, but he sits back and takes it easy when the price goes down. This we neither understand nor appreciate.

### Pictures of Award Winners

Last September the American Sugar Cane League had the pleasure of joining with the L.S.U. Extension Service in presenting high yield awards to 25 cane farmers. At that time we stated that the recipients of the high yield awards had demonstrated the value of scientific farming and in doing so had rendered an invaluable service to the Louisiana Sugar Industry. We certainly are still of this opinion.

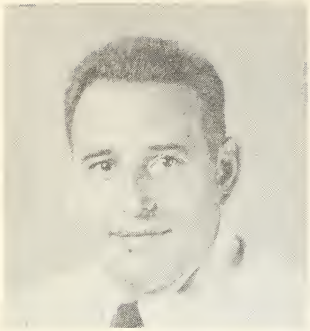
We now have pictures of the people who received the awards and in this issue we will begin reproducing them.

### Welcome Back Dr. Coleman

Dr. Robert E. Coleman has rejoined the staff of the Houma Station after an absence of nearly three years in Hawaii, where he was associated with the Experiment Station of the Hawaiian Sugar Planters' Association. While in Hawaii Dr. Coleman conducted experiments on the influence of various soil and weather conditions on flowering of sugarcane, and methods by which flowering may be controlled, which may prove beneficial in the breeding work for Louisiana. He also studied at the University of Hawaii, where he was awarded the Ph.D degree in August of this year.

The Louisiana industry will welcome Dr. Coleman's return because of his long experience with the

(Continued on page 69)



# IN THE FIELD WITH LLOYD LAUDEN

*by Lloyd L. Lauden*

In spite of the fact that everyone in the Louisiana sugar industry is happy over the high sucrose content of cane this year, everyone wants to know why. Many theories have been advanced dealing with varieties, cultural practice and, most of all, weather conditions, but actually no one has come up with a good answer.

Varieties have not changed greatly since last year. Percent of acreage planted to the different varieties in use this year and last year did change to some extent. The acreage planted to C. P. 44-101 and N. Co. 310 increased. Acreage planted to C. P. 35 - 105 decreased. Acreage planted to the other varieties changed only to a minor degree. The only two varieties that are in the field this year that were not in the field last year are C. P. 48-103 and C. P. 47-193, released in the fall of 1955. For this crop they occupy less than one percent of the total acreage. It is very difficult to assume that varieties are responsible for the change in sucrose this year.

When considering cultural practices, the belt as a whole must be examined. Certainly there are a few growers who changed or modified one, or a few, operations this year. Every year some one fails to get in the last working; someone uses more or less fertilizer than the recommendation; and someone always has a new idea on cultivating etc. In spite of the minor changes that took place in the field this year the crop was handled in a very normal way. It is also very difficult to believe that the small changes on only a few places could have had any great influence on the sugar content of the whole crop.

After eliminating the varieties used and the way the crop was handled in the field as possible reasons for a good sugar content year, then the only factor left is the weather. Although rainfall is not the only factor of weather which influences the production of a crop, it is probably the most important. It is important to point out here that the question is not what influenced tons of cane per acre, but what influenced pounds of sugar per ton of cane. It is generally true throughout the belt that there were periods during the middle and late summer when moisture was inadequate for vegetative growth. It is also true that, with few exceptions, little rainfall was had late in the year other than that which occurred during Hurricane Flossy and the week following the storm. It is possible that when vegetative growth was retarded because of the drought, the processes of maturation began prematurely.

There are also the exceptions; places where adequate rainfall was received for good vegetative growth throughout the season. Good sucrose in cane is also being reported on these places.

Even though the fields showed a green color early in the spring, growth was very slow. There were no spring freezes as in 1955 to cut

# SUGAR QUOTAS INCREASED TO 9,000,000 TONS

*(Official Release)*

On November 30th the U. S. Department of Agriculture announced a further increase of 125,000 tons in the total sugar quotas for the continental United States for 1956. With this increase the 1956 quotas total 9,000,000 short tons, raw value.

The increase is based on the following "Statement of Bases and Considerations":

Supplies previously made available appear adequate to meet distribution requirements. However, sugar prices have risen and further rises in the price of refined sugar have been announced. Accordingly, this action is taken for the purpose of checking the upward price trend and of providing even more ample supplies to consumers.

The revised quotas and prorations, adjusted for deficits, which will be effective when Amendment 9 to S. R. 811 is filed with the Federal Register, and the increases involved are as follows:

| | Revised quotas and prorations (short tons, raw value) | Increase |
|---|---|---|
| Domestic beet sugar | 1,955,401 | 28,068 |
| Mainland cane sugar | 601,696 | 8,637 |
| Hawaii | 1,091,305 | 15,665 |
| Puerto Rico | 1,141,098 | 16,380 |
| Virgin Islands | 12,000 | 0 |
| Republic of the Philippines | 980,000 | 0 |
| Cuba | 3,089,760 | 54,000 |
| Dominican Republic | 42,329 | 5,059 |
| El Salvador | — | — |
| Haiti | 4,097 | 489 |
| Mexico | 12,042 | (deficit) |
| Nicaragua | 4,530 | 0 |
| Peru | 59,305 | 0 |
| Unspecified countries | 6,437 | 113 |
| Total | 9,000,000 | |

The revised quantities that may be brought in for direct consumption are as follows:

| | Short tons raw value |
|---|---|
| Hawaii | 30,700 |
| Puerto Rico | 133,064 |
| Republic of the Philippines | 59,920 |
| Cuba | 375,000 |
| Other foreign countries | 43,772 |

## IN THE FIELD

the crop back to the ground but the cool dry days this spring prevented rapid growth. Nevertheless this amount of growth added to the total number of days of growth for the crop.

The Weather Bureau reports no outstanding difference in weather this year over last year other than the periods of drought mentioned earlier. Maximum temperatures during the summer were slightly lower this year than last year.

It is interesting to note that a number of Minnesota Farm Bureau members from the sugar beet area visited the cane fields and National Refinery at Reserve, La., last week. They reported that tons of beets per acre were slightly lower than yields were last year in the area but that, for some unknown reason, the sugar content was the highest on record.

## UP FRONT

(Continued from page 67)

problems of freeze injury and post-harvest losses in mill cane. Installation of temperature control equipment at the Houma Station was completed this fall, which will make possible a study of tolerance of different varieties to low temperatures, both as young plants in the spring and at harvest time. Dr. Coleman will also continue his study of means of minimizing losses in mill cane between cutting and grinding, particularly as influenced by differences in varieties. Other problems of sugarcane physiology will receive

(Continued on next page)

# 1956 MARKETING ALLOTMENTS FOR MAINLAND CANE SUGAR PROCESSORS REVISED

*(Official Release)*

On December 7th the U. S. Department of Agriculture announced revision of the allotments to mainland cane sugar processors. The revised allotments total 601,696 short tons, raw value, equal to the quota established by Sugar Regulation 811, Amendment 9 (announced November 30, Press Release USDA 3719-56). This is 8,637 tons more than previously allotted.

The new allotments to individual processors, which will become effective when Sugar Regulation 814.23, Amendment 5, is fixed with the Federal Register, are as follows:

| Processors | Allotments (short tons raw value) |
|---|---|
| Albania Sugar Company | 6,744 |
| Alice C. Ref. & Plntg., Inc. | 7,923 |
| Alma Plantation, Ltd. | 7,622 |
| J. Aron & Co., Inc. | 13,458 |
| Billeaud Sugar Factory | 8,031 |
| Breaux Bridge Sugar Coop., Inc. | 7,364 |
| J. M. Burguieres Co., Ltd., The | 6,335 |
| Burton-Sutton Oil Co., Inc. | 6,774 |
| Caire & Graugnard | 3,339 |
| Caldwell Sugar Coop., Inc. | 12,291 |
| Catherine Sugar Company, Inc. | 7,039 |
| Columbia Sugar Company | 5,390 |
| Cora-Texas Mfg. Co., Inc. | 2,449 |
| Dugas & LeBlanc, Ltd. | 11,334 |
| Duhe & Bourgeois Sugar Co., Inc. | 8,675 |
| Erath Sugar Co., Ltd. | 4,909 |
| Evan Hall Sugar Coop., Inc. | 21,609 |
| Evangeline Pepper & Food Products, Inc. | 5,029 |
| Fellsmere Sugar Producers Assoc. | 8,573 |
| Frisco Cane Co., Inc. | 914 |
| Glenwood Coop., Inc. | 14,282 |
| Godchaux Sugars, Inc. | 35,229 |
| Helvetia Sugar Coop., Inc. | 6,985 |
| Iberia Sugar Coop., Inc. | 13,295 |
| LaFourche Sugar Company | 15,178 |
| Harry L. Laws & Company, Inc. | 9,896 |
| Levert-St. John, Inc | 8,801 |
| Loisel Sugar Co., Inc. | 5,469 |
| Louisiana State Penitentiary | 3,766 |
| Lula Factory, Inc. | 11,653 |
| Meeker Sugar Coop., Inc. | 3,489 |
| Milliken & Farwell, Inc. | 12,537 |
| Okeelanta Sugar Refinery, Inc. | 12,140 |
| M. A. Patout & Son, Ltd. | 8,085 |
| Poplar Grove Pltg. & Ref. Co. | 6,401 |
| St. James Sugar Coop., Inc. | 12,543 |
| St. Mary Sugar Coop., Inc. | 13,031 |
| Slack Bros., Inc. | 3,249 |
| Smedes Bros., Inc. | 4,650 |
| South Coast Corp. | 44,073 |
| Southdown Sugars, Inc. | 40,530 |
| Sterling Sugars, Inc. | 11,996 |
| J. Supple's Sons Plntg. Co. | 4,470 |
| United States Sugar Corp. | 109,647 |
| Valentine Sugars, Inc. | 12,411 |
| Vermilion Sugar Co., Inc. | 2,322 |
| Vida Sugars, Inc. | 4,542 |
| A. Wilbert's Sons Lbr. & Sh. Co. | 8,946 |
| Young's Industries, Inc. | 6,178 |
| Louisiana State University | 100 |
| All other persons | 000 |
| Total | 601,696 |

## UP FRONT

his attention, including study of means of improving germination of seed cane.

### Income Tax Help Available

Farmers who are confronted with problems growing out of the new social security phases of their Federal income tax returns, as well as with other points in their tax determinations, will get a big assist from the new 1956 edition of the Farmers' Tax Guide now available at district offices of the Internal Revenue Service and from county farm agents, according to a news release of the Internal Revenue Service.

The 64-page booklet has been brought up to date by the national office of the tax collection agency with the aid of revenue agents in farm areas, the Federal extension service of the Department of Agriculture, and the state extension services of the Federal land grant colleges.

Farmers desiring a copy of the guide should visit either of the available distribution points or write at once requesting copies. Supplies of the booklet are available at the local Internal Revenue Service office, to which address mail requests also should be sent.

# COMMERCIALLY RECOVERABLE SUGAR DETERMINATION FOR THE 1956 CROP OF LOUISIANA SUGARCANE

Hundredweights of Sugar, Raw Value, Commercially Recoverable Per Ton of Sugar Cane for Percentages of Sucrose in Normal Juice from 8.0% to 18.0%, Inclusive

| % Sucrose Normal Juice | Cwt. Sugar Per Ton Cane | % Sucrose Normal Juice | Cwt. Sugar Per Ton Cane | % Sucrose Normal Juice | Cwt. Sugar Per Ton Cane |
|---|---|---|---|---|---|
| 8.0 | .901 | 11.5 | 1.520 | 15.0 | 2.083 |
| 8.1 | .918 | 11.6 | 1.536 | 15.1 | 2.100 |
| 8.2 | .934 | 11.7 | 1.551 | 15.2 | 2.116 |
| 8.3 | .951 | 11.8 | 1.567 | 15.3 | 2.133 |
| 8.4 | .968 | 11.9 | 1.582 | 15.4 | 2.149 |
| 8.5 | .984 | 12.0 | 1.598 | 15.5 | 2.166 |
| 8.6 | 1.001 | 12.1 | 1.614 | 15.6 | 2.183 |
| 8.7 | 1.018 | 12.2 | 1.630 | 15.7 | 2.199 |
| 8.8 | 1.035 | 12.3 | 1.646 | 15.8 | 2.216 |
| 8.9 | 1.051 | 12.4 | 1.662 | 15.9 | 2.232 |
| 9.0 | 1.068 | 12.5 | 1.677 | 16.0 | 2.249 |
| 9.1 | 1.088 | 12.6 | 1.693 | 16.1 | 2.266 |
| 9.2 | 1.107 | 12.7 | 1.709 | 16.2 | 2.283 |
| 9.3 | 1.127 | 12.8 | 1.725 | 16.3 | 2.300 |
| 9.4 | 1.147 | 12.9 | 1.741 | 16.4 | 2.317 |
| 9.5 | 1.166 | 13.0 | 1.757 | 16.5 | 2.333 |
| 9.6 | 1.186 | 13.1 | 1.773 | 16.6 | 2.350 |
| 9.7 | 1.206 | 13.2 | 1.789 | 16.7 | 2.367 |
| 9.8 | 1.226 | 13.3 | 1.806 | 16.8 | 2.384 |
| 9.9 | 1.245 | 13.4 | 1.822 | 16.9 | 2.401 |
| 10.0 | 1.265 | 13.5 | 1.838 | 17.0 | 2.418 |
| 10.1 | 1.283 | 13.6 | 1.854 | 17.1 | 2.435 |
| 10.2 | 1.300 | 13.7 | 1.870 | 17.2 | 2.452 |
| 10.3 | 1.318 | 13.8 | 1.887 | 17.3 | 2.469 |
| 10.4 | 1.336 | 13.9 | 1.903 | 17.4 | 2.486 |
| 10.5 | 1.353 | 14.0 | 1.919 | 17.5 | 2.503 |
| 10.6 | 1.371 | 14.1 | 1.935 | 17.6 | 2.520 |
| 10.7 | 1.389 | 14.2 | 1.952 | 17.7 | 2.537 |
| 10.8 | 1.407 | 14.3 | 1.968 | 17.8 | 2.554 |
| 10.9 | 1.424 | 14.4 | 1.985 | 17.9 | 2.571 |
| 11.0 | 1.442 | 14.5 | 2.001 | 18.0 | 2.588 |
| 11.1 | 1.458 | 14.6 | 2.017 | | |
| 11.2 | 1.473 | 14.7 | 2.034 | | |
| 11.3 | 1.489 | 14.8 | 2.050 | | |
| 11.4 | 1.504 | 14.9 | 2.067 | | |

Elmore Albert, Route #2, Box 118-H, St. Martinville, La.
In 1955 Mr. Albert produced an average of 24.8 tons of cane per acre on 89.6 acres.

**J. Wilson Lepine, Laurel Valley Plantation, Thibodaux, La.**
**Mr. Lepine produced an average of 33.5 tons of cane per acre on 606.6 acres.**

**Ruffin Bergeron, Star Route, Gibson, La.**
**Mr. Bergeron produced an average of 34.5 tons of cane per acre on 202.2 acres.**

**Edmund Crochet, Lakeland, Louisiana**
**Mr. Crochet produced an average of 40.59 tons of cane per acre on 12.6 acres.**

**Andrew P. Broussard, Route #1, Box 125, Lafayette, La.**
**Mr. Broussard produced an average of 33.3 tons of cane per acre on 116.9 acres.**

**Cremaldi Brothers, Patterson, La.**
**(Left to right, Anthony, Gus, Cosimo, Lucien, John)**
**The Cremaldi Brothers produced an average of 30.9 tons of cane per acre on 177.5 acres.**

**John Best, Port Allen, La.**
**Mr. Best produced an average of 38 tons of cane per acre on 482.4 acres.**

**Alvin B. Daigle, Route #1, Box 616, White Castle, La.**
**Mr. Daigle produced an average of 37.2 tons of cane per acre on 65.3 acres.**

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**Mr. Trahan produced an average of 52.4 tons of cane per acre on 7.4 acres.**

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in the interests of the Domestic Sugar Cane Industry

THE
# SUGAR BULLETIN

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Gilbert J. Durbin, Editor — Andrew W. Dykers, Managing Editor

Lloyd L. Lauden, Agronomist and Field Representative

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# UP FRONT WITH THE LEAGUE

*by A. W. Dykers*

### 8,800,000 tons

The U.S.D.A. announced its 1957 sugar consumption estimate on December 20th and we are printing the full text of the announcement beginning on page 86 of this issue.

It will be noted that the powers that be in Washington estimate that this country will consume 8,800,000 tons of sugar in 1957 which they say will "provide a supply adequate to meet a normal rate of sugar consumption and maintain year end stocks of sugar at about the same level as at the end of this year". (1956)

The familiar worn out words about how the consumption estimate will result in "prices that will maintain and protect the welfare of the domestic sugar industry" are missing from the announcement which really doesn't make much difference since the Department's idea of what constitutes protecting the welfare of the domestic sugar industry has been rather amazing, to say the least.

Never since 1947 have refined sugar prices reached the goal indicated in the Sugar Act and the price of raw sugar has, of course, followed suit. We note that the official release on page 86 has this to say relative to prices in 1956.

"The wholesale price of refined sugar, New York basis, averaged 8.72 cents per pound during the first 10 months of 1956 and early in December increased to 9.10 cents per pound. These prices are 4 percent and 8 percent, respectively, higher than the annual average for 1955. The current price is 113.7 percent of the 1947-49 average, whereas, the Consumers' Price Index in October 1956 was 117.7 percent of the 1947-49 average. The Consumers' Price Index in October was less than 3 percent above the 1955 average."

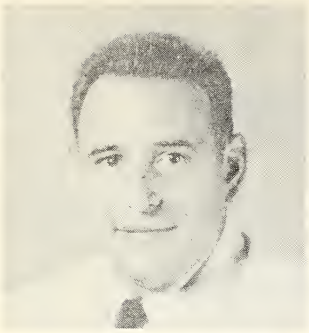
A little quick calculating will show that the 117.7 Consumers' Price Index referred to in the above paragraph indicates that, according to law, $9.43 per hundred pounds is a fair price for refined sugar. This makes us wonder why the Sugar Branch felt called upon to pull out all the stops when the price of refined sugar in New York advanced to 9.10.

The victims of the "9,000,000 ton panic" of November 30th were the cane growers and raw sugar producers. The advance in the price of refined sugar has held, but the price of raw sugar is off 15 points.

### Plan Florida Trip

The time has arrived again for our sugar cane experts to make their annual trip to Florida to talk matters over with the Florida experts, and this they will do during the week of January 14th.

Those making the trip this year will be Mr. S. C. Munson, Chairman of the League's Contact Committee; Dr. S. J. P. Chilton, Head of the Department of Plant Pathology of Louisiana State University; Mr. Lloyd L. Lauden, Agronomist of the American Sugar Cane League, and Messrs. Louis Arceneaux and Malcolm Duhe, who each operate a primary seed increase station.



# IN THE FIELD WITH LLOYD LAUDEN

*by Lloyd L. Lauden*

**An early look at the 1957 crop.**

Although it is almost impossible for anyone to predict at this time with any degree of accuracy what the cane fields will look like this coming April, the outlook for both plant and stubble stands appears good for 1957.

The August planted cane was up to an excellent stand, and growth in many areas was three feet tall before the first killing frost cut stands back to the ground. Each year more early planting is done. There was probably more acreage early planted to C. P. 44-101 than to all other varieties. C. P. 44-101 responds very nicely to early planting. It is usually tall enough to cut for seed in August.

The fall planted cane, almost without exception, had the benefit of the rains from Hurricane Flossy or received rains the week following the storm. This moisture almost guaranteed good germination since the temperature was also favorable. Fall planted cane marked the row well

(Continued on page 94)

# IN WASHINGTON WITH JOE FERRIS

*by Josiah Ferris*

The old year closed with unusual activity in the U. S. Department of Agriculture, particularly in the Sugar Division. Despite the long Christmas holiday, December 21st to December 26th, Larry Myers and his staff were busy grinding out numerous determinations and press releases announcing administrative actions under the Sugar Act.

In addition to making several revisions to sugar quota allotments to the various areas, the department also announced the sugar requirements for 1957; the local 1957 sugar quotas for Hawaii and Puerto Rico; preliminary marketing allotments to processors of the 1957 sugar quotas for mainland cane and continental beet areas, and definitions to meet the requirements of Section 101(n) of the Sugar Act as amended in 1956.

In past years the Sugar Division has been one of the best organized and smoothest operating units of any of the administrative departments of the government, and 1956 was no exception, except in just one instance, whch could have been due to Christmas spirit or gremlins in one of the well-worn government typewriters. Anyway the order of December 27, 1956 announcing the preliminary marketing allotments to processors of the 1957 sugar quotas for the mainland cane area contained one or two slight errors. The official announcement had been mailed only a short time when the errors were discovered and corrected, but several faces in the division had a rosy hue which could not be attributed to health or appetite.

The Agriculture department in announcing the preliminary 1957 marketing allotment of 450,000 tons which will be effective January 1, 1957 will remain in effect until an order can be issued on the basis of a public hearing to be held shortly after March 1, 1957. According to the department's announcement, this interim action is necessary because the quantity of sugar from the 1956 crop that will be available for marketing early in 1957 might otherwise make it possible for some processors to market a quantity of sugar larger than their eventual allotment. The preliminary 1957 mill allotments are based on the 1956 formula established in Sugar Regulation 814.23, Amendment 2.

The Sugar Act definitions proposed by the U. S. Department of Agriculture on December 28, 1956 are designed to provide precise distinctions between raw sugar and direct-consumption sugar. The definitions, principally of the term "to be further refined or improved in quality", are authorized by the recent amendments to the Sugar Act. The Department's proposals with respect to them are set forth in a "recommended decision" to be published soon in the Federal Register.

In technical terms, the proposed regulation describes specific processes to meet the requirements of section 101 (n) of the Sugar Act, as amended. It also establishes standards of quality, which when used in conjunction with a specified process will make it possible to distinguish precisely between raw sugar

(Continued on page 94)

# SUGAR QUOTAS TOTALING 8,800,000 TONS ANNOUNCED FOR 1957

*(Official Release)*

Sugar quotas for 1957 totaling 8,800,000 short tons, raw value, were announced on December 20th by the U. S. Department of Agriculture. This figure compares with quotas for 1956 initially totaling 8,350,000 tons and currently totaling 9,000,000 tons.

Sugar quotas govern the new supply of sugar from all sources, foreign and domestic, available for marketing in the continental United States. The 8,800,000 ton quota announced is expected to provide a supply adequate to meet a normal rate of sugar consumption and maintain year-end stocks of quota sugar at about the same level as at the end of this year.

Department officials stated that the full amount of probable domestic quota requirements has been established initially so that supplying areas can plan to make the sugar supplies available. Although world sugar supplies are expected to be adequate, there are now no reserves comparable to those of recent years to draw upon.

The Department also limited the amounts of the quotas that may be filled prior to November 1, 1957. Under the 1956 amendment of the Sugar Act most of the quotas are subject to change whenever the requirements are revised. Usually 860,000 to 1,000,000 tons of the quotas remain to be filled in the last two months of the year. The regulation for 1957 withholds until

**INITIAL 1957 SUGAR QUOTAS, "D. C. LIMITS" AND "ISA LIMITS"**

| Area and country: | Quota | Direct-consumption Limit | "ISA limit" |
|---|---|---|---|
| | Short tons, raw value | | |
| Domestic beet sugar | 1,909,188 | no limit | ----- |
| Mainland cane sugar | 587,476 | no limit | ----- |
| Hawaii | 1,065,513 | 29,996 | ----- |
| Puerto Rico | 1,114,130 | 130,016 | ----- |
| Virgin Islands | 15,193 | 000 | ----- |
| Republic of the Philippines | 980,000 | 59,920 | ----- |
| Cuba | 2,942,115 | 375,000 | ----- |
| Peru | 69,547 | 9,292 | 55,588 |
| Dominican Republic | 51,757 | 8,285 | ----- |
| Mexico | 34,209 | 15,048 | ----- |
| Nicaragua | 10,584 | 9,923 | 8,113 |
| Haiti | 5,761 | 5,761 | ----- |
| Netherlands | 3,313 | 3,313 | ----- |
| China | 3,267 | 3,267 | ----- |
| Panama | 3,267 | 3,267 | 1,374 |
| Costa Rica | 3,264 | 3,264 | 1,123 |
| Canada | 631 | 631 | ----- |
| United Kingdom | 516 | 516 | ----- |
| Belgium | 182 | 182 | ----- |
| British Guiana | 84 | 84 | ----- |
| Hong Kong | 3 | 3 | ----- |
| All other countries | ----- | ----- | ----- |

after November 1, 100,000 tons each of the quotas for the Domestic Beet Sugar Area and Cuba; 50,000 tons each of the quotas for the Mainland Cane Sugar Area, Hawaii and Puerto Rico; and 16,000 tons each of the quotas for the Dominican Republic, Mexico, and Peru.

The sugar quotas for individual areas and countries, the quantities that may be filled by direct-consumption sugar, and the limitations on imports from countries that are not members of the International Sugar Agreement, referred to as "ISA limits", are shown in the following table. "ISA limits" are listed for all "quota countries" which have not been members of the Agreement but each limit will apply only during such part of 1957 as the country remains a non-member.

The "Statement of Bases and Considerations" included in the determination to be published in the Federal Register is as follows:

"Surpluses which have characterized the world sugar supply situation during the past several years have been liquidated. This liquidation has resulted from unfavorable growing conditions, increased consumption, and demand for larger inventories. Although supplies are expected to be adequate, it is necessary that the full amount of probable requirements for the continental United States be established initially. This will provide a basis upon which the supplying areas can plan to make the needed supplies available. Moreover, the strengthening in world prices in both the "spot" and new-crop futures positions in recent weeks has reduced the dependence of domestic prices upon tight quota controls.

"To provide a supply sufficient to meet consumption requirements during the year and the maintenance of inventories, sugar requirements for 1957 are established at 8,800,000 short tons, raw value. This quantity of sugar should provide for a total of refinery and invisible stocks of quota sugar at the end of 1957 approximately equal to the combined total of such stocks for the end of 1956. With refiners again dependent upon quota sugar for melting throughout 1957, it is anticipated that most refiners will reduce their year-end stocks of over-quota offshore sugar at the end of 1957. Over-quota stocks of mainland cane sugar will be greatly reduced by the end of 1956.

"The statistical background of this determination is outlined below.

"For the twelve-month period ended October 31, 1956, distribution of sugar by refiners, importers and processors amounted to 8,750,000 tons. This is 230,000 tons larger than the quantity distributed for the corresponding period a year earlier. If allowance is made for an increase in consumption of 150,000 tons, it appears that invisible inventories increased moderately during the twelve-month period ended October 31. Invisible inventories were very low in 1955.

"For the calendar year 1956 through December 8, the quantity distributed exceeded that for the corresponding period of 1955 by about 480,000 short tons, raw value. For the calendar year 1955, distribution amounted to 8,400,000 tons and consumption apparently amounted to around 8,500,000 tons. After again allowing for increased consumption in 1956, it appears that as of December 8 invisible inventories had probably increased somewhat more than 200,000 tons in 1956. The net change for the year will, of course, reflect distribution during the subsequent three weeks.

"Stocks of quota sugar held by refiners and importers on December 31, 1956, may be somewhat higher than they were a year earlier but they are expected to be well below the levels for other years under the Sugar Act of 1948. Stocks of over-quota sugar from offshore areas are currently around 70,000 tons larger than they were a year ago but stocks of over-quota sugar from the main-

(Continued on page 94)

# USDA ALLOTS 1957 MAINLAND CANE SUGAR QUOTA

*(Official Release)*

On December 27th the U. S. Department of Agriculture announced preliminary marketing allotments to processors of the 1957 sugar quota for the Mainland Cane Sugar Area. The preliminary allotments, which will be effective January 1, 1957, and will remain in effect until an order can be issued on the basis of a public hearing to be held in 1957, total 450,000 tons, raw value.

This interim action is necessary because the quantity of sugar from the 1956 crop that will be available for marketing early in 1957 might otherwise make it possible for some allottees to market a quantity of sugar larger than their eventual allotment.

The preliminary 1957 allotments are based on the 1956 allotments established in Sugar Regulation 814.23, Amendment 2. The allotments to individual processors are as shown in the following table:

| Processors | Allotments (short tons, raw value) |
|---|---|
| Albania Sugar Company | 5,044 |
| Alice C. Plantation & Refy., Inc. | 5,926 |
| Alma Plantation, Ltd. | 5,701 |
| J. Aron & Company, Inc. | 10,065 |
| Billeaud Sugar Factory | 6,006 |
| Breaux Bridge Sugar Coop., Inc. | 5,507 |
| J. M. Burguieres Co., Ltd., The | 4,738 |
| Burton-Sutton Oil Company, Inc. | 5,066 |
| Caire & Graugnard | 2,497 |
| Caldwell Sugars Coop., Inc. | 9,192 |
| Catherine Sugar Co., Inc. | 5,264 |
| Columbia Sugar Company | 4,031 |
| Cora-Texas Mfg. Co., Inc. | 1,831 |
| Dugas & LeBlanc, Ltd. | 8,477 |
| Duhe & Bourgeois Sugar Co., Inc. | 6,488 |
| Erath Sugar Company, Ltd. | 3,671 |
| Evan Hall Sugar Coop., Inc. | 16,161 |
| Evangeline Pepper & Food Products, Inc. | 3,761 |
| Fellsmere Sugar Producers Assoc. | 6,411 |
| Frisco Cane Company, Inc. | 683 |
| Glenwood Coop., Inc. | 10,681 |
| Gulf States Land & Industries, Inc. | 15,808 |
| Helvetia Sugar Coop., Inc. | 5,224 |
| Iberia Sugar Coop., Inc. | 9,943 |
| LaFourche Sugar Company | 11,352 |
| Harry L. Laws & Company, Inc. | 7,401 |
| Levert-St. John, Inc. | 6,582 |
| Loisel Sugar Company, Inc. | 4,090 |
| Louisiana State Penitentiary | 2,816 |
| Lula Factory, Inc. | 8,715 |
| Meeker Sugar Coop., Inc. | 2,610 |
| Milliken & Farwell, Inc. | 9,377 |
| National Sugar Refining Co., The (Reserve Division) | 10,539 |
| Okeelanta Sugar Refinery, Inc. | 9,080 |
| M. A. Patout & Son, Ltd. | 6,047 |
| Poplar Grove Pltg. & Ref. Co., Inc. | 4,787 |
| St. James Sugar Coop., Inc. | 9,380 |
| St. Mary Sugar Coop., Inc. | 9,745 |
| Slack Bros., Inc. | 2,430 |
| Smedes Bros., Inc. | 3,478 |
| South Coast Corp., The | 32,961 |
| Southdown Sugars, Inc. | 30,312 |
| Sterling Sugars, Inc. | 8,972 |
| J. Supple's Sons Pltg. Co., Ltd. | 3,343 |
| United States Sugar Corp. | 82,003 |
| Valentine Sugars, Inc. | 9,282 |
| Vermilion Sugar Company, Inc. | 1,737 |
| Vida Sugars, Inc. | 3,396 |
| A. Wilbert's Sons Lbr. & Sh. Co. | 6,690 |
| Young's Industries, Inc. | 4,621 |
| Louisiana State University | 78 |
| Any other person | 00 |
| Total | 450,000 |

## WEEKLY AVERAGE PRICES

The weekly average prices issued by the Louisiana Sugar Exchange since the start of the 1956 - 57 pricing period have been as follows:

Week ending October 11, 1956
Raws 6.15, Blackstrap 21.20

Week ending October 18, 1956
Raws 6.17, Blackstrap 22.00

Week ending October 25, 1956
Raws 6.24, Blackstrap 23.30

Week ending November 1, 1956
Raws 6.40, Blackstrap 23.96

Week ending November 8, 1956
Raws 6.225, Blackstrap 24.00

Week ending November 15, 1956
Raws 6.18, Blackstrap 24.75

Week ending November 22, 1956
Raws 6.17, Blackstrap 25.42

Week ending November 29, 1956
Raws 6.29, Blackstrap 27.00

Week ending December 6, 1956
Raws 6.38, Blackstrap 27.00

Week ending December 13, 1956
Raws 6.31, Blackstrap 27.00

Week ending December 20, 1956
Raws 6.26, Blackstrap 27.00

Week ending December 27, 1956
Raws 6.28, Blackstrap 27.00

# SUGAR MARKET STATISTICS THROUGH DEC. 26, 1956

| | Today | 1 Month Ago | 1 Year Ago |
|---|---|---|---|
| QUOTA RAWS DELIVERED NEW YORK | 6.35 | 6.27 | 6.00 |
| QUOTA RAWS DELIVERED NEW ORLEANS | 6.28 | 6.17 | 5.92 |
| WORLD SPOT RAWS (In Cuba) | 4.85 | 4.40 | 3.14 |

## SUGAR FUTURES No. 6
(Closing Bid Prices)

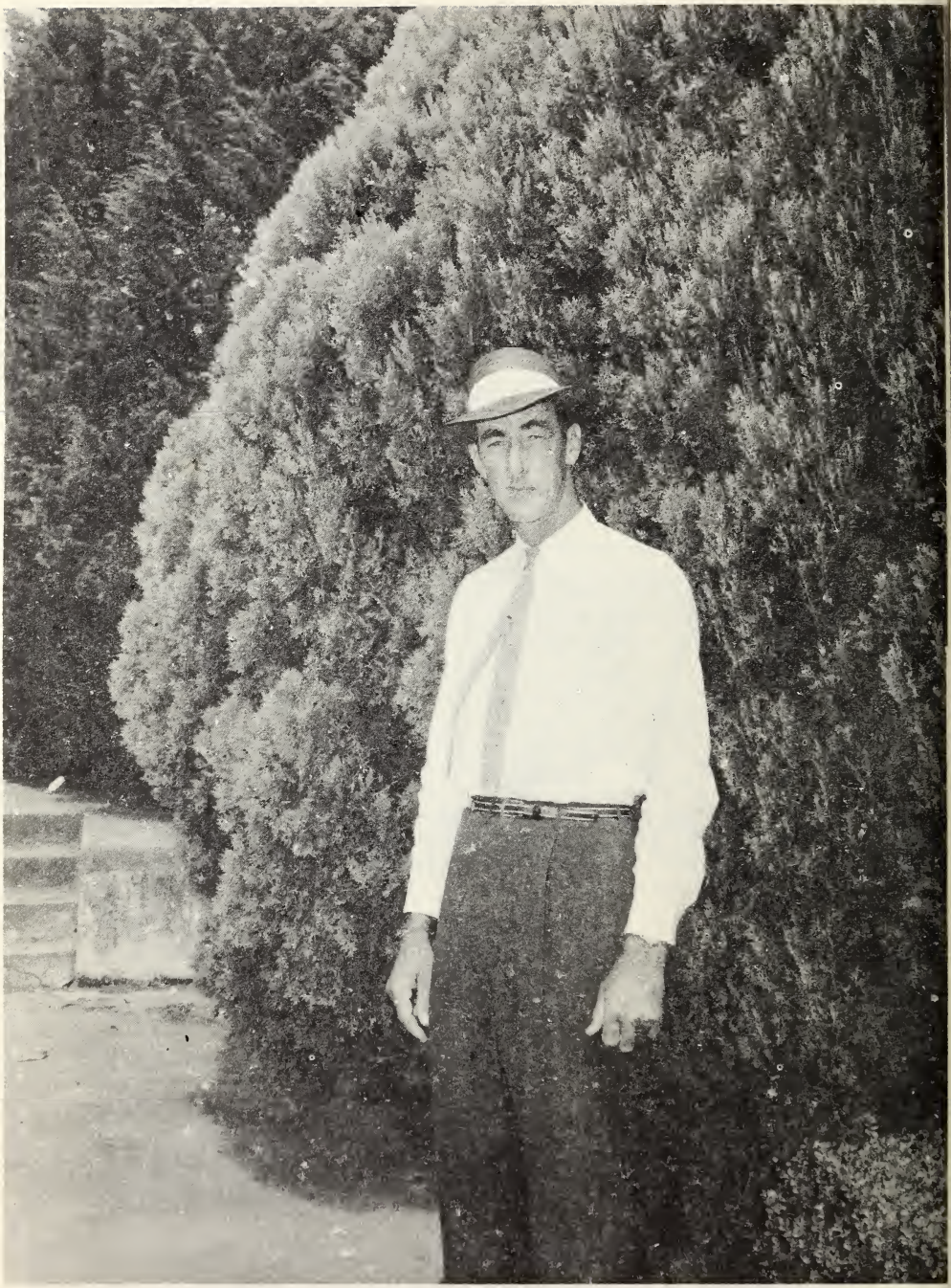
| | Mar. | May | July |
|---|---|---|---|
| Today | 5.76 | 5.74 | 5.85 |
| 1 Month Ago | 5.89 | 5.85 | 5.90 |
| 1 Year Ago | 5.34 | 5.40 | 5.49 |

## OFFSHORE RECEIPTS AT NEW ORLEANS
(Long Tons, 2,240 lbs.)

| | To Date 1956 | Same Date 1955 |
|---|---|---|
| American | 374,406 tons | 398,613 tons |
| National (Godchaux) | 212,092 tons | 181,162 tons* |
| Colonial | 157,262 tons | 129,090 tons* |
| Henderson | 109,991 tons | 92,254 tons |
| Southdown | 39,952 tons | 24,789 tons |
| South Coast | 70,966 tons | 55,410 tons* |
| Supreme | 106,127 tons | 105,651 tons |
| Totals | 1,070,796 tons | 983,572 tons |

* Revised

**Nicholas Paul, Star Route A, Box 59, Franklin, La.**
**Produced an average of 36.1 tons of cane per acre on 98.8 acres in 1955.**



**Voorhies Viator, Route #1, Box 344, New Iberia, La.**
**Produced an average of 49.1 tons of cane per acre on 24 acres in 1955.**

**August Richard, R.F.D. Box 597-A, Thibodaux, La.**
**Produced an average of 38.2 tons of cane per acre on 53.4 acres in 1955.**

**Carlo Pizzolota, Donaldsonville, La.**
**Produced an average of 44.8 tons of cane per acre on 45.5 acres in 1955.**

**Lynn J. Schexnayder, New Roads, La.**
**Produced an average of 37.4 tons of cane per acre on 198.4 acres in 1955.**

## IN THE FIELD

(Continued from page 84)

before the first killing frost.

A small amount of acreage was planted after the harvest began. This cane had the benefit of moisture from earlier rains and in many cases some seed pieces germinated during harvest time. This cane, thus far, has not been subjected to severe cold and waterlogged conditions. In general, stands in the entire plant crop are very pretty.

It has been a long time since the Louisiana sugar industry enjoyed such excellent weather as that experienced for the 1956 harvest. It was only during the last days of harvest that rains caused some difficulty and then only to the few mill areas where the harvest extended after December 18. As a result of good weather for harvest and in spite of the large amount of cane which was harvested in a downed position, the stubble fields look good. There were only a very few ruts cut or rows torn up since almost no bogging of equipment occurred during harvest.

A large percent of the stubble crop for 1957 will be in the variety C. P. 44-101. C. P. 44-101 has the ability, and usually the field record, of producing excellent stubble stands in spite of an occasional weak plant cane stand. It is good to add that field records have indicated that stubble yields of C. P. 44-101 have been as good or better than plant cane yields. Prospects for stubble stands look good for all varieties.

Each year since 1953 a greater amount of heat treated cane has been planted. With the improvement of the heat treating equipment and the better knowledge of handling the direct heat treated seed, stands from cane treated in 1956 will be better than stands in previous years. It goes without saying that stands from the offspring of heat treated cane will be good. One of the advantages of using seed free of Stunting Disease is that stands are generally better from clean seed than from field-run seed.

Getting good stands is not the only thing that insures a good crop but it surely is a mighty important thing to have. If January and February are fairly dry and March is warm, Louisiana will have a record year for good stands.

———o———

## IN WASHINGTON

(Continued from page 85)

and direct-consumption sugar. The standard for crystalline sugar is fixed essentially at 99 sugar degrees with a tolerance of 0.20 sugar degree. The proposed regulation, which is based on the record of a hearing held by the Department on July 30, 1956, also prescribes procedures for administering provisions of the regulation.

Anyone interested may file written exceptions to the "recommended decision" within a period not to exceed 10 days from the date of its publication in the Federal Register, which is scheduled for January 8, 1957. Rules of practice and procedures under which the recommended decision was prepared and published and under which written exceptions may be filed are set forth in Sugar Regulations 801, as revised (Federal Register, pages 4251-55, June 16, 1956).

———o———

## QUOTAS

(Continued from page 87)

land cane area on December 31 are expected to be around 150,000 tons smaller than they were a year ago.

"The wholesale price of refined sugar, New York basis, averaged 8.72 cents per pound during the first 10 months of 1956 and early in December increased to 9.10 cents per pound. These prices are 4 percent and 8 percent, respectively, higher than the annual average for 1955. The current price is 113.7 percent of the 1947-49 average, whereas, the Consumers' Price Index in October 1956 was 117.7 percent of the 1947-49 average. The

Consumers' Price Index in October was less than 3 percent above the 1955 average.

"After considering all of the factors, quotas totaling 8,800,000 short tons, raw value, are believed to be required to provide a supply of sugar in 1957 which meets the objectives of the Act."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# THE SUGAR BULLETIN

Vol. 35 — No. 8 JANUARY 15, 1957

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Published on the First and Fifteenth of each month
in the interests of the Domestic Sugar Cane Industry

THE
# SUGAR BULLETIN

414 Whitney Bldg., New Orleans 12

Gilbert J. Durbin, Editor — Andrew W. Dykers, Managing Editor

Lloyd L. Lauden, Agronomist and Field Representative

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# UP FRONT WITH THE LEAGUE

*by A. W. Dykers*

### Sugar Prices

Remarkable developments have taken place in the "World" sugar market during the past three months and the Old Mule's former poor relation has been having himself a ball.

On October 30th, "World" sugar was selling for $3.23 a hundred pounds f.o.b. Cuba and today (January 14th) the f.o.b. Cuba price is $6.20. This is an increase of $2.97 a hundred pounds and the sellers of "World" sugar are really "eating high on the hog."

*Editor's note*: Our fearless field man left for Florida weighing 215 pounds. He must be "eating high on the hog" too.

Just in case some of our readers are as mixed up as we are, let's remember that there are two sugar markets. The "World" market is for sugar *not* sold in the United States and the "Domestic" market is for sugar that is sold in the United States.

The quotations for both markets are based on Cuban raws but the "World" price is f.o.b. Cuba, whereas the "Domestic" price is C.I.F. (cost, insurance and freight) plus duty, delivered New York.

To put "World" and "Domestic" quotations on a comparable footing, we must either subtract the C.I.F. charges and the duty from the "Domestic" price, or add the C.I.F. charges and the duty to the "World" price.

This machine we use here in the office is sorta old fashioned and adds better than it subtracts, so let's add. It's easier.

The "World" price today is $6.20. The cost, insurance, and freight is 55 cents and the duty is 50 cents:—$6.20 plus 55, plus 50 equals (unless we punched the wrong keys) $7.25. The New York quotation for duty paid "Domestic" raws today is $6.48, which makes "World" sugar worth today about 77 cents a hundred pounds more than "Domestic" sugar, to the Cuban seller.

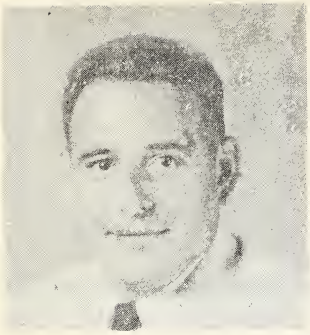
To say that Mr. Myers and his Sugar Branch are disturbed over this situation is probably the understatement of the year. With 1957 only eleven days old, they have increased 1957 quotas from 8,800,000 tons to 9,000,000 tons and have done a few other things which are enumerated in the official release on page 104 of this issue.

From this it will be seen that the boys in Washington are going to do all they can to keep our Old Mule from running after his jet propelled cousin and they may turn the trick. However, it is going to take a lot of doing.

Quota increases this early in the year are simply expressions of disfavor. It remains to be seen whether this form of psychology will keep the Old Mule from taking the bit in his teeth and hightailing after his less inhibited foreign counterpart.

### Southern Farm Forum

The Tenth Annual Southern Farm Forum will be held in New Orleans on January 24th and 25th. The meeting place this year will be the Grand ballroom of the Roosevelt Hotel. (See program on page 102)



# IN THE FIELD WITH LLOYD LAUDEN

*by Lloyd L. Lauden*

## Canal Point, Florida, Meeting

Each year several members of the Louisiana Sugar Industry, Louisiana State Experiment Station, and the U.S.D.A. Houma Sugar Station visit the Canal Point, Florida, Cane Breeding Conference.

This year, Mr. Malcolm Duhe of Duhe Brothers, who operates a Primary Seed Increase Station; Mr. Ridley LeBlanc, of Gulf States Land and Industries, who operates a Secondary Seed Increase Station and a Cane Variety Test Field; Mr. Stephen C. Munson, Chairman of the Contact Committee, American Sugar Cane League; Dr. E. V. Abbott, Superintendent, U. S. D. A., Houma Sugar Station; Dr. Robert Coleman, Plant Physiologist, Houma Station; Dr. Charles Schexnayder, Plant Pathologist, U.S.D.A., Houma Station; Dr. S. J. P. Chilton, Head of the Department of Plant Pathology, L.S.U.; and the writer, will meet with Dr. H. M. Tysdal, Head, Sugar Crops Section, U.S.D.A.; Mr. Bascom Belcher, Agronomist and Superintendent of the Canal Point Station; Mr. Carl Grassl, Plant Breeder, Canal Point Station; Dr. Edwin Todd, Plant Pathologist, Canal Point Station; and Dr. Elias Paliatseas, Plant Breeder, Louisiana State University, who is stationed at Canal Point for the cane breeding season.

The meeting will be held January 15 and 16 at the Canal Point Station. The general purpose of the meeting is to discuss the overall cane breeding program as it affects the Louisiana Sugar Industry.

It is interesting to note that all varieties grown commercially for sugar in Louisiana today, with the exception of N. Co. 310 and Co. 290, were bred at Canal Point, Florida; however, an intensive sugar cane breeding program is now being conducted at L.S.U. in full cooperation with the U.S.D.A.

In the fall of each year and prior to beginning of the cane breeding season, many of the same group mentioned earlier and others from the industry, L.S.U. and the U.S. D.A. meet in Louisiana to plan what specific crosses should be made, and to decide the techniques to be used both at the Canal Point and the Baton Rouge Cane Breeding Stations.

More specifically, the meeting at the Canal Point Station is to discuss the crosses made, the result of the techniques used, the amount of seed produced, the quality of the seed produced, and the crosses yet to be made. Facilities at Canal Point, such as greenhouses, photoperiod houses, etc., are examined and discussed for possible improvements and additions. Finances are also discussed.

In addition to the conference at the Station, many in the group will visit the three Florida sugar factories and their sugar cane fields. The Louisiana sugar industry extends thanks to Mr. Harry Vaughn, Mr. W. C. Prewitt, Dr. B. A. Bourne of the U. S. Sugar Corporation, Mr.

# IN WASHINGTON WITH JOE FERRIS

*by Josiah Ferris*

### 1957 Marketing Hearing

The U. S. Department of Agriculture has tentatively selected March 15, 1957 as the date for the 1957 Mainland Cane market allotment hearing. The hearing will be held in Robert E. Lee room, Hotel Monteleone, New Orleans, Louisiana. The hearing on the 1957 marketing allotment for the Continental Beet Area will be held in Dallas, Texas, January 30, 1957.

### Beet Acreage Increased

The U. S. Department of Agriculture increased the 1957 sugar beet acreage from 885,000 acres to 932,000 acres, or a total of 47,000 acres.

Department officials stated that this increase was made necessary to assure production of sufficient beet sugar to meet the 1957 quota outlets and carryover requirements into 1958 of the domestic beet sugar producing area.

According to the department 2,000 acres of the 47,000 acre increase represented an increase in the "Reserve", which was established at 500 acres under the original determination, issued September 25, 1956. This increase is being made to provide additional acreage for establishing proportionate shares, or acreage allotments, for producers who have been forced to discontinue sugar beet operations in one state because of adverse natural conditions and who undertake to continue operations in another state.

### 1957 Quotas Increased

The United States Department of Agriculture took sugar representatives by surprise when they announced four further steps to prevent further rises in domestic sugar prices. According to Department of Agriculture spokesmen, the actions taken are as follows:

"1) The estimate of domestic sugar requirements (total quotas) are immediately increased from 8,800,000 tons to 9,000,000;

"2) The domestic beet acreage authorized for planting in 1957 is being increased to 950,000 acres compared to the 932,000 announced on January 3, and 850,000 acres authorized in 1956;

"3) The International Corporation Administration and other agencies of the Government are being asked to review their programs to make certain that the foreign aid and credit programs of the United States will not have the effect directly or indirectly of supporting the inflationary trend in world sugar prices;

"4) The Department is giving consideration to the advisability of export controls to prevent the exportation of domestic sugar while world market prices remain above a parity with those in the United States."

---

Salustiano Garcia, Mr. Manuel de Quintana, Mr. P. M. McIntyre of Okeelanta Sugar Refinery, and Mr. R. T. Stapp of Fellsmere Factory and Refinery for the time given Louisiana visitors in the past. The tours through the factories and fields have been very interesting.

# PROGRAM OF THE TENTH ANNUAL SOUTHERN FARM FORUM

MEETING THEME — "DOES FEDERAL POLICY SHACKLE SOUTHERN FARMERS?"

January 24

*Morning Session*

8:30 A. M.

Registration — Entrance to Grand Ball Room—Roosevelt Hotel.

9:15 A. M.

Grand Ball Room

Opening of Forum by J. Harry Stevens, Chairman, Farm Forum Committee.

Introductions by the Chairman.

Presiding Officer—Wm. L. Waddell, Chairman, Southwide Advisory Committee, A. & P. Tea Co., Jacksonville, Florida.

Discussion of 1957 Conditions and Problems in Various Agricultural Industries by:

- Poultry — Dr. John H. Quisenberry, Head of Poultry Dept., Texas A. & M., College Station, Texas.
- Cotton — Owen Cooper, Executive Vice-President, Mississippi Chemical Corporation, Yazoo City, Miss.
- Rice — George B. Blair, General Manager, American Rice Growers Assn., Lake Charles, La.
- Sugarcane — Wm. S. Chadwick, Assistant to the President, Southdown Sugars, Inc., New Orleans, La.
- Livestock — George Moffatt, Manager of Agriculture Dept., The First National Bank of Memphis, Memphis, Tenn.
- Horticulture Crops — H. K. Riley, Head of Dept. of Plant Industry, Southwestern La. Institute, Lafayette, La.

Period for questions from the audience.

*Afternoon Session*

12:05 P. M.

Luncheon — International Room, Roosevelt Hotel.

The Farm Forum group will attend the luncheon meeting of the Members' Council of the Chamber of Commerce of the New Orleans Area. J. Mason Guillory, Chairman of the Members' Councill will preside.

The speaker will be Robert W. Akers, Editor-in-Chief, *Beaumont Enterprise and Journal,* Beaumont, Texas.

2:00 P. M.

Grand Ball Room—Roosevelt Hotel.

Presiding Officer — Charles W. Frank, Jr., Vice-President, Farm Forum Committee, New Orleans.

Panel — "Soil Bank: Good or Bad".

Panel Leader — P. O. Davis, Director, Agricultural Extension Service, Alabama Polytechnic Institute, Auburn, Alabama.

Panel Members:

E. E. Edmundson, Jr., President, Triple E, Inc., New Orleans, La.

C. E. Slack, State Administrative Officer, Agricultural Stabilization and Conservation Committee, US DA, Alexandria, La.

Fred Hurst, Director of Information, Farm Credit District of New Orleans, New Orleans, La.

Claude Arceneaux, Manager, Farm Department, Guaranty Bank and Trust Co., Lafayette, La.

Period for questions from the audience.

January 25

*Morning Session*

9:15 A.M.

Grand Ball Room—Roosevelt Hotel.

Presiding Officer—Wm. L. Waddell, Chairman, Southwide Advisory Committee, A. &. P. Tea Co., Jacksonville, Florida.

Panel — "More or Less Subsidy of the Family Farm".

Panel Leader — Dr. M. D. Woodin, Agricultural Economist, L. S. U. Agricultural Experiment Station, Baton Rouge, La.

(Continued on page 104)

# USDA TAKES FURTHER ACTION TO STABILIZE SUGAR PRICES

On January 11th the U. S. Department of Agriculture announced four further steps it is taking to prevent further rises in domestic sugar prices.

The actions taken or to be taken are as follows:

1. The estimate of domestic sugar requirements (total quotas) is immediately increased from 8,800,000 tons to 9,000,000 tons.

2. The domestic beet acreage authorized for planting in 1957 is being increased to 950,000 acres compared with 932,000 announced on January 3 and 850,000 acres authorized in 1956.

3. The International Cooperation Administration and other agencies of the Government are being asked to review their programs to make certain that the foreign aid and credit programs of the United States will not have the effect directly or indirectly of supporting the inflationary trend in world sugar prices.

4. The Department is giving consideration to the advisability of export controls to prevent the exportation of domestic sugar while world market prices remain above a parity with those in the United States.

Department officials pointed out that the present sugar situation is the result of a number of developments. Last summer world sugar stocks were reduced to a normal level in contrast with the surplus situation which had prevailed for

(Continued on next page)

**1957 SUGAR QUOTAS AND "D. C. LIMITS"**

| Area and country | Quota | Direct-consumption Limit |
|---|---|---|
| | Short tons, raw value | |
| Domestic beet sugar | 1,953,952 | no limit |
| Mainland cane sugar | 601,250 | no limit |
| Hawaii | 1,090,496 | 30,700 |
| Puerto Rico | 1,140,253 | 133,064 |
| Virgin Islands | 15,549 | 0 |
| Republic of the Philippines | 980,000 | 59,920 |
| Cuba | 3,001,295 | 375,000 |
| Peru | 78,207 | 9,560 |
| Dominican Republic | 61,657 | 8,523 |
| Mexico | 44,409 | 15,481 |
| Nicaragua | 11,731 | 10,208 |
| Haiti | 6,179 | 6,179 |
| Netherlands | 3,453 | 3,453 |
| China | 3,386 | 3,386 |
| Panama | 3,386 | 3,386 |
| Costa Rica | 3,381 | 3,381 |
| Canada | 631 | 631 |
| United Kingdom | 516 | 516 |
| Belgium | 182 | 182 |
| British Guiana | 84 | 84 |
| Hong Kong | 3 | 3 |
| All other countries | --- | --- |
| Total | 9,000,000 | |

## PRICES

several years. Some of last fall's European crops were disappointing, and that fact, together with apprehension about the Suez situation, led to some stockpiling of sugar. Currently the situation is apparently being intensified by speculative buying in the futures market.

The supply of 9,000,000 tons is believed adequate to meet the actual consumption of sugar in the United States in 1957 and to provide certain replenishments of stocks.

The increase authorized in the domestic beet acreage will enable processors to contract for sufficient additional acreage to replace the quantities for which additional marketing quota is now provided.

The new quotas and quantities that may be brought in for direct consumption are shown in the accompanying table. Other restrictions remain as stated in the original determination.

———o———

## PROGRAM

(Continued from page 102)

Panel Members:

F. L. Spencer, State Director, Farmers Home Administration, Alexandria, La.

Dr. N. D. Morgan, Southwest Agronomist, American Potash Institute, Inc., Shreveport, La.

Larry Lovell, President, Louisiana Farm Bureau Federation, Baton Rouge, La.

Sam Smith, Manager, La.-Miss. Milk Producers Assn., Franklinton, La.

12:15 P. M.

Luncheon — Grand Ball Room Roosevelt Hotel — Courtesy Reynolds Metals Company.

Presiding—Charles Walte, Jr., Vice-Chairman, Southwide Advisory Committee, Reynolds Metals Co., Louisville, Ky.

Address — "Industry's Faith in the Farmer".

Keen Johnson, Vive-President and Director of Public Relations, Reynolds Metals Company, Louisville, Ky.

Closing of the Forum.

———o———

## WEEKLY AVERAGE PRICES

The weekly average prices issued by the Louisiana Sugar Exchange since the start of the 1956-57 pricing period have been as follows:

Week ending October 11, 1956
Raws 6.15, Blackstrap 21.20

Week ending October 18, 1956
Raws 6.17, Blackstrap 22.00

Week ending October 25, 1956
Raws 6.24, Blackstrap 23.30

Week ending November 1, 1956
Raws 6.40, Blackstrap 23.96

Week ending November 8, 1956
Raws 6.225, Blackstrap 24.00

Week ending November 15, 1956
Raws 6.18, Blackstrap 24.75

Week ending November 22, 1956
Raws 6.17, Blackstrap 25.42

Week ending November 29, 1956
Raws 6.29, Blackstrap 27.00

Week ending December 6, 1956
Raws 6.38, Blackstrap 27.00

Week ending December 13, 1956
Raws 6.31, Blackstrap 27.00

Week ending December 20, 1956
Raws 6.26, Blackstrap 27.00

Week ending December 27, 1956
Raws 6.28, Blackstrap 27.00

Week ending January 3, 1957
Raws 6.31, Blackstrap 27.00

Week ending January 10, 1957
Raws 6.34, Blackstrap 27.00

Season's Average Through January 10, 1957
Raws 6.265, Blackstrap 25.259

**J. Malcolm Duhe, of Duhe Brothers Planting Company, P. O. Box 241, New Iberia, La. Produced an average of 25.5 tons of cane per acre on 931.4 acres in 1955.**

Joseph G. Beaud, Route #2, New Roads, La.
Produced an average of 35.2 tons of cane per acre on 2.60.6 acres in 1955.

**Harold J. Junca, Star Route B, Box 350, Franklin, La.**
**Produced an average of 26.7 tons of cane per acre on 306.5 acres in 1955**

**Bennet Talley, Route #1, Box 270, Breaux Bridge, La.**
**Produced an average of 39.2 tons of cane per acre on 47.3 acres in 1955.**

**W. J. Bernard, of Bernard Brothers, Cade, La.**
**Produced an average of 24.8 tons of cane per acre on 279.4 acres in 1955.**

**Lawrence Dugas, Route #1, Box 343, St. Martinville, La.**
**Produced an average of 30.7 tons of cane per acre on 129.8 acres in 1955.**

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# THE SUGAR BULLETIN

Vol. 35 — No. 9 FEBRUARY 1, 1957

Official Bulletin of the American Sugar Cane League of the U. S. A.

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in the interests of the Domestic Sugar Cane Industry

THE SUGAR BULLETIN

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Gilbert J. Durbin, Editor — Andrew W. Dykers, Managing Editor

Lloyd L. Lauden, Agronomist and Field Representative

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# UP FRONT WITH THE LEAGUE

*by A. W. Dykers*

### The Old Mule

The Southern Farm Forum was held in New Orleans as planned on January 24th and January 25th and W. H. Chadwick spoke for the sugar industry. His talk is printed in this issue, beginning on page ....

The Louisiana sugar industry has come a long way during the past ten years. We have new canes, new harvesters, new loaders, new ditchers, new cultivating equipment and, in fact, new and better just about everything. Apparently the only antiquated thing here-abouts is the Old Mule.

Speaking of the Old Mule, our market character has been subjected to some pretty rough treatment during the past two weeks. The price of "Domestic" sugar has skidded 30 points since our last report.

### Recording

To keep the record straight, we would like to say that we do not object to Mr. Myers and his Sugar Division using the Sugar Act to curb run away prices in the Domestic sugar market, *if our domestic price is higher than the Sugar Act intended it to be;* a condition which we have yet to see.

We have said many times that the purpose of the Act is to divorce the "Domestic" market from the "World" market and this holds true in our book whether the price of "World" sugar is up or the price of "World" sugar is down. Our quarrel with the administrators of the Sugar Act is that they always seem to know what to do to curb prices, but appear to be utterly helpless when the Domestic price is obviously less than it should be. The record shows few instances where the price of sugar has advanced because of administrative action.

### Meeting Scheduled

Mr. Frank T. Carroll, Jr., Assistant to the Dean of the College of Engineering of Louisiana State University, has asked us to announce the following meetings to be held on the campus of the University in Baton Rouge, La.

1. The Sixth Annual Water Symposium, February 19th and 20th.
2. The Twentieth Annual Short Course for Superintendents and Operators of Water and Sewerage Plants, March 20th, 21st, and 22nd.
3. The Eleventh Annual Industry-Faculty Conference, March 28th and 29th.

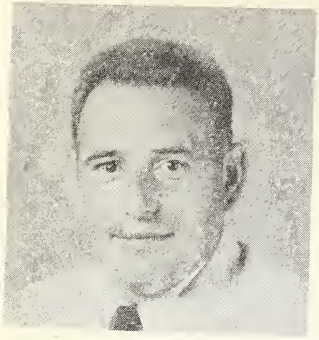
### Queen Sugar XV

A few days ago we had the pleasof meeting Miss Yvonne Cheramie, of Raceland, for the first time since she was chosen Queen Sucrose XV.

For those of you who are as slow about getting around as we are, we would like to report that Miss Cheramie is quite a gal. She is not only pretty like a queen—but smart, too.

She appeared on television twice while in New Orleans and did a bang-up job of ad libbing before the cameras. She was especially pleasing on the WDSU Midday show when she reminded her viewers that a spoonful of sugar contains only eighteen little old calories.

Miss Cheramie came to New Orleans to reign as queen of the Southern Farm Forum. We are very glad that she did.



# IN THE FIELD WITH LLOYD LAUDEN

*by Lloyd L. Lauden*

## Spring Meetings

County Agents, Extension Service Specialists, and Experiment Station Scientists are again this year holding group meetings in many of the sugar cane Parishes.

The purpose of the meetings is to take to the farmer in detailed form the latest findings in research and to discuss fully the advantages and disadvantages of many things done in the cane fields today.

In some areas, a large number of farmers attend the meetings and certainly each year the turnout gets better. But sometimes these meetings are attended by as few as only 15 farmers. The fact that some meetings are attended by only a few does not mean that the meetings are not successful. Many times small group meetings have that added personal touch that is so important and so conducive to the asking of good "down to earth" questions.

Many of the small group meetings last a long time after the last speaker has finished his talk. Audience participation then begins.

As a general rule, there is a direct answer to most of the questions asked but, occasionally, the farmer is told that more research is needed before a positive and final answer can be given. The group is then told of the research in progress that will add to the information already available.

The question and answer section of the meeting serves a two-fold purpose. First; to answer the specific questions and clear up the loose ends not covered by the speaker, and second; to stimulate thought for new research. Much agricultural research was initiated by questions by farmers.

In an effort to make it more convenient for farmers to attend these meetings, many meetings have been held at night. This is not as important in the early part of the year as later in the cultivation season when farmers are very busy working their crops. Remember the Extension Specialists and the Scientists travel either from Baton Rouge or from Houma to attend the meetings.

Not all phases of sugar cane research are covered in each meeting. Sometimes only a few of the timely studies are discussed. Fertilizer and weed control is usually discussed at an early meeting, cultural practices and borer control at a later meeting, with variety planting, Stunting Disease, and harvesting studies later in the summer and early fall.

In addition to giving facts and figures, these meetings do one other very important thing. Farmers learn to have both a higher regard for, and a better understanding of, research, and the scientists learn from the farmers that there are both many and larger problems yet to be solved.

Take advantage of these meetings. Much time, effort, and money is spent in getting this information for you. Go to the meetings. Use the information. Be a better cane farmer and make more money.

# IN WASHINGTON WITH JOE FERRIS

*by Josiah Ferris*

## Expanded Research on Sugar

Recommendations for intensified research on sugarcane and sugar beets were made by the U. S. Department of Agriculture's Sugar Research and Marketing Advisory Committee, at its annual meeting January 9-11, held this year in Washington, D. C.

Generally, the group called for a program to improve production, processing utilization, and marketing of sugar and sugar by-products.

In production research, the committee stressed the need for expanded breeding and testing programs—including basic genetic studies—to develop improved varieties of sugar beets, sugarcane, and sugar sorghums. Such research would be aimed at continuing the development of superior varieties resistant to diseases, insects, nematodes, and other hazards, with higher sucrose content, better processing and keeping qualities, and more suitable for mechanical operations.

In utilization research, the group called for expanded research on the chemical composition of sugar beets and sugarcane to learn more about how plant composition affects processing and yield.

In marketing research, the committee urged initiation of a study of trends and inter-relationships within the sugar industry to supply basic facts on beet and cane production, processing and refining, products and markets, trade channels, and prices.

Other lines of work given high priority by the committee included the following:

*Production*: Expand research on the nematode problem in both sugar beets and sugarcane. Expand research on weed control including development and evaluation of new and existing herbicides.

*Utilization*: Accelerate basic research and pilot-plant processing studies on after-harvest losses prior to processing of sugar from sugarcane and sugar beets. Initiate studies on the direct utilization of sugar beets as processed feeds.

*Marketing*: Initiate a study on the demand for sugar, including trends and factors likely to affect future demand. Expand research on changes in the structure, organization, and operation of the sugar industry, with one phase of the study directed toward the economics of by-product production, prices and markets.

The committee will submit a detailed report of its recommendations to the Department. Copies of this report may be obtained in a few weeks from the committee's executive secretary, Marshall J. Goss, Office of the Administrator, Agricultural Research Service, U. S. D. A. Washington 25, D. C.

Chairman of the committee is Dudley Smith, vice president, Association of Sugar Producers of Puerto Rico, Washington, D. C.

# W. S. CHADWICK ADDRESSES FARM FORUM

*(January 24, 1957)*

*Mr. Chairman and Members of the 10th Annual Southern Farm Forum:*

It is a pleasure and an honor to be here and I mean that most sincerely.

The members of the Agricultural Committee of the New Orleans Chamber of Commerce and their able Chairman, Mr. Charles Frank, Jr., are to be soundly congratulated on their sponsorship of this Southern Farm Forum. Through it they have provided a means whereby representatives of various farming interests may present their case to the public and to others engaged in Southern agriculture. Some of them I am sure will have serious industry-wide problems for which they are seeking help toward a solution. Others, and I am one of these, will be primarily interested in placing before you an accurate picture of conditions within an industry. Those of us who have dealt with industry problems and particularly those problems created by Federal control can quickly agree that the lack of widespread accurate understanding of the true conditions within an industry are often our biggest stumbling block.

Much of what I shall say will be purely personal opinion. Many of my remarks with regard to technological advancement will apply generally to other types of agriculture. We will be most interested in learning here today of similar or even far greater progress in other agricultural lines.

In December, Louisiana completed the harvesting of its 1956 crop. 49 factories processed this sugar cane into 431,000 tons of sugar. That incidentally is an entire year supply for some 8,000,000 people, providing not only the sugar for their table but enough also for their cakes, candy, soft drinks and other sugar containing products. In addition to the sugar, the area produced some 30,000,000 gallons of blackstrap molasses and 3,000,000 gallons of edible molasses. The value of the crop at the first processing level is in excess of $70,000,000. This too would be a large figure if we had not all recently read about the National budget.

It is interesting to note that just ten years ago there were 60 factories rather than the 49 we have today and those 60 factories handled a smaller crop. Comparing 1955, the last year for which we have detail figures, with ten years ago we find that 18% less factories ground 33% more cane and produced 37% more sugar. Hourly grinding rates were an astounding 150% of the 1946 level while lost time had been reduced by 35%.

The Sugar Industry has at present two principal by-products, the ground sugar cane pulp, which we call bagasse, and blackstrap molasses. Just a few years ago bagasse had but one industrial use. A portion of it was being sold for the manufacture of wallboard. Since this accounted for only a fraction of the total production, the remaining quantity was burned in the factories' furnaces. Today the manufacture of wallboard continues but new uses have come into the picture. A paper plant has been constructed and is not only successfully producing paper from bagasse but is already expanding its capacity. This same company has found a means of producing a basic plastic material from bagasse. Another company has found that it can be marketed as chicken litter after screening, drying and baling. It has been found that bagasse can be combined with drilling mud to produce a desirable product for certain oil operations. Still another company and Louisiana State University are experimenting

(Continued on page 123)

# COMPARISON OF THE USUAL OFF-BARRING WITH A MODIFIED METHOD OF OFF-BARRING ON YIELDS OF SUGARCANE IN LOUISIANA

*By L. P. Hebert and R. J. Matherne, Research Agronomists, Field Crops Research Branch, Agricultural Research Service, United States Department of Agriculture.*

Off-barring is a common practice in cultivating sugarcane in Louisiana. It consists of removing the dirt in the late winter or early spring from each side of the line of cane by means of turning plows or discs, and letting it remain in that condition for varying lengths of time depending principally on the weather, available labor, and equipment. Developed from experience over the years, this operation became a standard practice in sugarcane cultivation. At first it was done with walking plows after the middles had been "wrapped" by making a round with the same turning plow earlier in the winter. Then, as tractors came into use, it was done mechanically. The "wrapping" operation left approximately 24 inches of total row width while the off-barring removed an additional 10 to 12 inches, leaving the row 12 to 14 inches wide. Perhaps the principal reason for off-barring cane in the beginning was to leave as small an area for hand weeding, or hoeing, as possible. When all the weeds had to be removed by hand, or with a hoe, much time was saved if a portion of the row was cleaned with the plow. Of equal importance, off-barring left a trench for application of fertilizer when solid fertilizers were used. Other reasons given for off-barring are that it improves tilth and permits the sun to penetrate to the plant roots, thereby hastening germination and emergence at a time when a quick start is all-important. A possible disadvantage of leaving the rows on the off-bar, and one that can be very important, is that drainage is impaired and long rainy periods can result in damage to the crop.

Two reasons for off-barring in the old manner have been eliminated in recent years. Labor shortages have virtually forced discontinuance of hand hoeing for weed control, while anhydrous or aqua ammonia which have replaced solid fertilizers, are applied with tools that do not require the off-bar furrow. As a result some growers have adopted the practice of immediately bringing the dirt back to rebuild the row after having off-barred in the conventional manner or with disc plows. This method is termed modified off-barring in this paper.

## Plan of the Experiment

In an effort to determine the effect of rebuilding the row immediately after off-barring, as compared to conventional off-barring which leaves the cane on the off-bar furrow for several days, a series of experiments was started on Mhoon silty clay loam level phase soil in 1952 and continued through 1955. Two complete cycles of plant cane, first and second stubble, were involved with C. P. 36/105, C. P. 43/47, and C. P. 44/101 in the 1952-54 series, and C. P. 36/105, C. P. 44/101, and C. P. 44/155 in the 1953-55 series. A randomized block split plot design with the off-barring treatments as the main plots, and the varieties as sub-plots, was used in these tests with twelve replications of each treatment during the first series and 15 replications during the last series.

The cane in each plot was weighed at harvest time to determine yields per acre, and 20-stalk samples were taken for customary juice analyses for sucrose and purity to calculate sugar yields.

(Continued on next page)

## Results and Discussion

Table 1 gives the average yields of cane and sugar for the four varieties in two complete series of tests during the period 1953 to 1955, inclusive. An analysis of variance of the data from which average values presented in table 1 are derived showed that there were no significant differences between treatments, and that interactions between varieties and treatments were not significant, i.e., the varieties responded alike to the treatments. Highly significant values were obtained for differences between varieties as might be expected with the ones used in these tests.

There were essentially no differences in yields of cane or sugar per acre and in maturing qualities, measured by indicated yields of sugar per ton of cane. In the average of all tests the off-barred plots yielded 0.79 ton of cane per acre more than the modified off-barred plots, but this was largely offset by the slightly higher yields of sugar per ton so that the difference in yields of sugar per acre was only 147 pounds in favor of the usual off-barring method. Two of the varieties, C. P. 36/105 and C. P. 44/101, gave slightly higher yields in the modified off-barred plots in the 1952-54 series, while C. P. 43/47 gave slightly higher yields in the conventional off-barred plots in the 1952-54 series, and all three varieties gave slightly higher yields in the conventional off-barred plots in the 1953-55 series.

As pointed out above, none of the differences are statistically significant and differences as high, or higher, than the ones obtained can be expected due to chance alone in most tests. It would seem safe to conclude from results of these few tests that there are no advantages to off-barring in the conventional manner on well drained light soils. It would also seem reasonable to assume that in seasons of heavy rainfall while the row is off-barred and drainage is impaired, much damage can be expected. This is particularly true on poorly drained heavy soils. It might be pointed out

(Continued on page 123)

**TABLE 1**

**Average yields of cane and sugar with four varieties in two series of experiments comparing off-barring and modified off-barring in Louisiana during the years 1952 to 1955, inclusive.**

| Series and Variety | Off-barred | | | Modified Off-barred | | |
|---|---|---|---|---|---|---|
| | Yield of cane per acre | Indicated yield of 96° sugar at harvest | | Yield of cane per acre | Indicated yield of 96° sugar at harvest | |
| | | Per ton of cane* | Per acre | | Per ton of cane* | Per acre |
| | tons | pounds | pounds | tons | pounds | pounds |
| 1952-1954 C.P. 36/105 | 24.82 | 192.5 | 4778 | 25.32 | 193.2 | 4892 |
| " " C.P. 43/47 | 25.29 | 212.4 | 5371 | 23.64 | 214.0 | 5058 |
| " " C.P. 44/101 | 35.03 | 199.7 | 6995 | 35.14 | 202.5 | 7116 |
| Av. of 3 varieties | 28.38 | 201.4 | 5715 | 28.03 | 203.0 | 5689 |
| 1953-1955 C.P. 36/105 | 27.89 | 183.5 | 5118 | 26.22 | 189.0 | 4956 |
| " " C.P. 44/101 | 35.60 | 183.8 | 6543 | 35.02 | 179.0 | 6270 |
| " " C.P. 44/155 | 27.92 | 199.9 | 5581 | 26.45 | 197.1 | 5212 |
| Av. of 3 varieties | 30.47 | 188.6 | 5747 | 29.23 | 187.4 | 5479 |
| Av. of 2 series All varieties | 29.42 | 194.8 | 5731 | 28.63 | 195.0 | 5584 |

* All sugar-per-ton yields are weighted values.

# SUGAR MARKET STATISTICS THROUGH JAN. 25, 1957

| | Today | 1 Month Ago | 1 Year Ago |
|---|---|---|---|
| QUOTA RAWS DELIVERED NEW YORK | 6.25 | 6.35 | 5.90 |
| QUOTA RAWS DELIVERED NEW ORLEANS | 6.17 | 6.28 | 5.86 |
| WORLD SPOT RAWS (In Cuba) | 6.35 | 4.85 | 3.28 |

## SUGAR FUTURES No. 6
(Closing Bid Prices)

| | Mar. | May | July |
|---|---|---|---|
| Today | 5.78 | 5.77 | 5.81 |
| 1 Month Ago | 5.76 | 5.74 | 5.85 |
| 1 Year Ago | 5.37 | 5.42 | 5.52 |

## OFFSHORE RECEIPTS AT NEW ORLEANS
(Long Tons, 2,240 lbs.)

| | To Date 1957 | Same Date 1956 |
|---|---|---|
| American | 15,029 tons | 18,100 tons |
| National (Godchaux) | 15,679 tons | 12,638 tons |
| Colonial | 14,763 tons | 18,389 tons |
| Henderson | 5,749 tons | 2,626 tons |
| Southdown | None | None |
| South Coast | None | 1,331 tons |
| Supreme | None | 3,832 tons |
| Totals | 51,220 tons | 56,916 tons |

* Revised

Herbert Cox, Houma, Louisiana
Produced an average of 45.6 tons of cane per acre on 113.5 acres in 1955.

**Etienne Rayne and Raymond Becnel, Edgard, Louisiana**
**Produced an average of 38.2 tons of cane per acre on 114.2 acres in 1955.**

**Horace Wilkinson III, Port Allen, Louisiana**
**Produced an average of 38.5 tons of cane per acre on 842.8 acres in 1955.**

## OFF-BARRING

(Continued from page 120)

that there were no prolonged rainy periods during the course of these tests. Since cane is rarely hand-hoed, and since fertilizer is rarely applied in the off-bar furrow at present, there is probably no reason for leaving the cane row off-barred for any length of time, unless it is to apply solid fertilizer; on the other hand, there is every reason to build up the row immediately after off-barring because of the better drainage that this method affords.

———o———

## ADDRESS

(Continued from page 118)

with its use as a cattle feed. We know that it can be made into the chemical called furfural.

The other by-product, molasses, also has been a drug on the market in past years. Its primary use was for the production of alcohol. Today it, too, seems to have found a place in the sun. Its value as a cattle feed is widely recognized and it is in popular demand despite low cattle prices. Molasses too has promise of industrial application. With this background it becomes easy to predict far greater achievements in the use of bagasse, molasses, waste muds and sugar cane tops.

Still further, many Louisiana companies have been wise enough to participate in the activities of an international scientific organization called Sugar Association, Inc., and its subsidiaries, Sugar Research Foundation and Sugar Information, Inc., whose ads we hope you have noticed. The combined effort of many sugar interests provides scientific work on a far larger scale than any one company could afford.

The Sugar Research Foundation

started out with the basic concept that sugar is a chemical compound available in tremendous quantities, in an almost pure state and at stable prices. Outstanding progress has been made. The most striking example has been the development of a new detergent made from sugar and vegetable oils. This detergent is not only odorless, colorless, tasteless, non-irritating, but is, in fact, actually edible. It can be produced, handled and shipped cheaper than the detergents now in use. We suspect you will be seeing it shortly. Other promising possibilities include such diverse items as pharmaceuticals, plastics, paints, insecticides and herbicides. If you will think for a moment of the tremendous number of products now being made as a result of similar research by the petroleum industry you can understand my optimism. Sucrochemistry can and will become as significant in American industry as petrochemistry is today.

All this takes place in an industry which was once called inefficient!

Let's now take a look at the farmer who produces the sugar cane from which this sugar is made. He, of course, produced the 33% more cane ground by the factories of 1955. What's more, he did it on 8% less acreage. His is also a fascinating story to tell and research plus what I call industrialization is the story. I prefer industrialization to the word mechanization because much more is included than merely the switch from mules to tractors or from hand tools to mechanical ones. It is an interesting sidelight, however, that the first industry to make large-scale use of the pneumatic tire on tractors was the sugar industry. Today the cane fields are populated by such heavy industrial equipment as drag lines, motor-patrol graders and crawler type tractors. The size of our operations plus the excessive weights which must be handled are always a major problem. Today we operate huge harvesters which cut sugar cane heavy enough to yield 40 tons to the acre in a continuous operation cutting off and separating the cane tops as it goes. It not only does this job when the cane is standing erect but can also do it when cane has been blown flat by a hurricane such as last year's Flossy. In the same operation it piles this cane from several rows on to one row to be picked up by a mechanical loader which is capable of handling in excess of 400 tons a day. The harvester is operated by only two men, the loader by one.

The other half of the farmer's life has also been tied up in that strange and wonderful world of research. Through the cooperative undertaking of the American Sugar Cane League, the United States Department of Agriculture and Louisiana State University it was found that anyone with the time, patience, money and audacity to grow and study 100,000 experimental sugar cane seedlings each year could expect to produce one bigger or better commercial variety each year. Incidentally that money figure is estimated to be approximately $150,000 per variety. In the past 26 years, 25 new varieties have been developed. If my mathematics is correct and if one man set out to duplicate this work and if he spent only five minutes examining each seedling, it would take him roughly 104 years to complete the job.

The farmer knows that sugar cane is a member of the grass family. He also knows that its principal enemy is grass. The scientist has taught him that certain chemical combinations, with completely impossible names, can kill one type of grass and not another. The same achievements have been and are being obtained in fertilization, drainage, tillage, insect control and further mechanization.

The net result of all of this has been a step-up in production of tons per acre by some 30% and sugar per acre by 40% since the post war period. The combination has achieved

a reduction in man hours of some 46%.

The sugar cane farmer also was once accused of being uneconomical, old-fashioned and a marginal producer.

Let's now take a look at the end product of these two, the farmer and the sugar factory operator. Raw sugar is today selling for just about exactly the same price it sold for when price controls were removed in 1947. You will agree with me that we cannot say the same thing about the materials which a farmer or processor buys. We often refer to sugar as one of the housewife's best food buys. On the basis of the number of working hours it takes a man to earn the money to buy a pound of sugar, the American sugar price is lower than in any other major country in the world. I am certain the same type remark as to price levels can and should be made on behalf of many other farm products. The world sugar market is a well-known dumping ground for sugar. Those of you who market farm commodities know what I mean by a dumping ground. Yet, and I can't help but add this, the world market is today substantially higher than the American market. I mention these facts not so much in the way of a complaint but rather to set at rest the accusation we hear so often that our industry operates under a protective umbrella of artificially high prices. One more point should be touched upon and that is the subject of sugar legislation. Sugar is controlled by a rather unique statute called the Sugar Act. This law was first enacted in 1934 and since then has been reviewed, extended or amended on ten occasions, the last being in 1956. The Act determines the amount of sugar which may be grown in the United States and its possessions and the amount of sugar so grown which may be sold in any given year. It also determines the amount which may be imported from foreign producers and specifically regulates the price of sugar cane, field wage rates, working conditions and a host of other necessarily related factors. Although the law is not supposed to be mandatory as far as the sugar farmer is concerned, it is in practice most mandatory. The Department of Agriculture sets the price of sugar cane so low that no farmer can stay in business on it alone. The Department collects a tax from the producer of sugar and pays a part of this tax back to the farmer so that if he is lucky he can then show a profit. The farmer is then required to comply with the provisions of the Sugar Act. The sale of sugar is limited to those processors who comply with the rules. Since the over-all supply of the nation's sugar is also a matter of regulations the Government maintains a high degree of control over retail prices.

I originally referred to the Sugar Act as being unique. I think it is. In the process of collecting a tax on sugar and paying back a portion of it to the farmer the Government makes an annual profit of some $17,000,000. To my knowledge it is the only Government farm commodity control program which operates at a profit.

In recent years the ability to produce sugar in Louisiana has far outstripped the quantity which we are permitted to sell. On January 1 of this year the producers had in their warehouses 213,000 tons of sugar from last year's production which they were required to withhold from the market. We thus started the year with 47% of a full year's sales on hand. At the moment it appears this problem will be with us for some years into the future. We will gain relief only to the extent that we share in the growth of this nation's sugar needs or to the extent by which we furnish sugar which some other area is not capable of producing. These gains will, of course, continue to be offset by increased productivity in our own fields and factories.

In summary, the technological progress of recent years leads me to the inevitable conclusion that research will point the way to further and greater advancement in the future. I do not want to leave the impression that we in the Louisiana sugar industry think the future will be "a bed of roses." We know we will continue to have problems but we do not see how they can be any bigger than the ones we have faced in the past. We look to the future with cautious optimism.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# THE SUGAR BULLETIN

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in the interests of the Domestic Sugar Cane Industry

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# SUGAR BULLETIN

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Lloyd L. Lauden, Agronomist and Field Representative

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# UP FRONT WITH THE LEAGUE

*by A. W. Dykers*

### Sugar Prices

Elsewhere in this issue we are printing the official weekly average prices of Louisiana raw sugar through the week ending February 7th. It will be noted that the average price for the week ending February 7th is 6.01 and that this is the lowest price recorded in the present Louisiana pricing period which began on the first Friday in October. It will also be noted that the weekly average raw sugar price has declined 36 points since January 17th when the quotation was 6.37.

The rapid decline in prices is, in our opinion, a direct result of the uncalled for January 11th increase in quotas to 9,000,000 tons. The following report taken from the January 31st "Sugar Review" of Lowry & Co., Inc. records the thinking of this nationally known sugar brokerage firm on this subject.

"*The Sugar Dilemma.* We are frequently asked by some of our more distant clients why the U. S. market drifts steadily downward with no apparent buyer interest despite the recent roaring world market and much-talked-about improved statistical position and possible over-all world shortage.

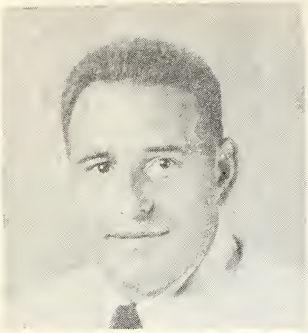
The answer is relatively simple. The "world" and the U. S. are two completely separate and divorced markets. The "world" labors under surpluses or scrambles for sugar in times of scarcity and/or panic. The U. S., on the other hand, is almost 100% sealed off from the free world market by a quota wall. Most of the time this quota wall acts as a dike against a deluge of cheap foreign sugar, but it can at times serve as a retaining wall to prevent our normal supplies from escaping into a temporarily higher outside market.

At the present time the quota system acts as a retaining wall, slowly smothering the sugar producers with what buyers obviously regard as a surplus. The initial quota of 8,800,000 was considered more than "full", taking into account increased invisibles and normal percapita consumption.

Due to the conditions existing at the time the initial quota was set there was a general recognition of the justification for providing for a bit too much rather than not quite enough. However, with no apparent signs of panic buying in the U. S. and no indications that the overall supply was insufficient, it is a bit more difficult to find arguments in favor of the further increase in supply brought about by the quota increase of January 11th, some three weeks after the initial quota was established.

With world prices declining, there is even less fear of panic-buying and hoarding throughout the country and a pall of gloom gradually settles over the domestic market. For the present at least the mathematics of the situation is very simple. The indicated supply is too large and the full effect of the quota has still not been felt. Unless jazzed up by new international developments, prices will continue to decline. Costs however increase steadily with new wage rates already granted or indicated for 1957 in most producing areas. Producers for several years have complained of the slow strangling cost-price squeeze, but it's go-

(Continued on page 140)



# IN THE FIELD WITH LLOYD LAUDEN

*by Lloyd L. Lauden*

## Fertilizing Time Approaching

Can the Louisiana sugar industry continue upward trends in tons of cane per acre? Certainly and positively yes. How? State average yield per acre will continue to increase as more cane farmers learn to believe in and follow the recommendations of the men in research and County Agents in the Sugar Belt.

In this issue of *The Sugar Bulletin* are two articles, "1957 Fertilizer Recommendations For Sugar Cane," by Dr. M. B. Sturgis, Mr. David Byrnside, both of L.S.U., and Mr. Lester Davidson of the U.S.D.A. Sugar Station, and "Recommendations for the Control of Johnson Grass and Other Weeds in Sugarcane" by Mr. Ernest R. Stamper and Dr. S. J. P. Chilton of Louisiana Agricultural Experiment Station. Read these articles carefully. A check with the farmers who produce high yields per acre will reveal that these recommendations are already being followed.

Special attention should be given that part of the fertilizer recommendations which deal with phosphate and potash. Legumes can be used to tell if there is a need for phosphorus and potassium. If poor growth of summer legumes has been obtained prior to plant cane, it is likely that an application of phosphate and potash will pay off.

Many cane farmers are already using phosphate and potash. Some are applying the phosphate to soybeans with a resulting response in the yield of cane. Others are using both potash and phosphate just before planting cane. Deficiencies in potash and phosphate are likely to exist in the very fine sandy loam and silt loam types of soil. Have soil samples analyzed. Check with the County Agent for information about having a soil analysis made.

Another article entitled, "Effect of Seed-Piece Size and Rate of Planting on Yields of Sugarcane, and of Nitrogen Fertilization on Yield of Seed Cane in Louisiana" by Dr. Leo P. Hebert, U.S.D.A. Houma Station, will appear in the next issue of *The Sugar Bulletin.* Make a special note now to read this article when it is published.

In summary, that part of Mr. Hebert's article which deals with high rates of nitrogen fertilizer on cane fields planned to be cut for seed cane next summer and fall, proves the following:

(1) It will pay farmers to use heavier than usual amount of nitrogen fertilizer on cane fields to be used for seed cane next planting season.

(2) It will certainly pay off where seed of a new variety is being increased.

(3) C. P. 36-13 yielded 41 percent more seed at the higher rate of nitrogen fertilizer.

(4) C. P. 36-105 and C. P. 44-155 yielded 20 to 25 percent more seed when the high rate of nitrogen was used.

(5) C. P. 44-101 yielded 10 per

(Continued on page 142)

# IN WASHINGTON WITH JOE FERRIS

*by Josiah Ferris*

### Committee for Defense

Establishment of a sugar Industry Advisory Committee for Defense has been announced by the U. S. Department of Agriculture. The Committee will meet at the call of its Government Chairman.

The announcement is in line with the Department's policy of consulting with representative industry groups in carrying out its part of defense or other programs affecting the national welfare. In this way it is possible for the Department to lay its defense planning problems before industry representatives for their advice and recommendations, and in turn, for the industry to present its problems.

Lawrence Myers, Director, Sugar Division, Commodity Stabilization Service, has been named Government Chairman of the committee.

Two or more members have been named from each major segment of the sugar industry. An alternate for each member, generally associated with the same business establishment, also has been named. To provide for continuity and also to permit rotation, appointments for about half of the members are initially made for a period of one year and the balance for two years. The Committee Members and their Alternates from the Mainland Cane Area are:

*Member*:

Wm. S. Chadwick
Southdown Sugars, Inc.
New Orleans, Louisiana

Earl B. Wilson
Sterling Sugars, Inc.,
Franklin, Louisiana

Hary T. Vaughn
U. S. Sugar Corporation
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W. C. Prewitt
U. S. Sugar Corporation
Clewiston, Florida

J. T. Bailey
Young Industries, Inc.,
Youngsville, Louisiana

### Sugar Supplies Ample for U. S. Market

Lawrence Myers, Director, Sugar Division, U. S. Department of Agriculture assured industrial sugar users of the United States that—"supplies are ample for the U. S. market".

Myers gave his assurance in a letter addressed to representatives of Industrial Users Group in Washington, D. C. on January 30, 1957. The Industrial Users Delegation had called on Myers to protest against current domestic sugar prices and to request further quota increases.

(Continued on page 138)

# RECOMMENDATIONS FOR THE CONTROL OF JOHNSON GRASS AND OTHER WEEDS IN SUGARCANE

*by Ernest R. Stamper and S. J. P. Chilton, Department of Plant Pathology, Louisiana Agricultural Experiment Station*

The use of chemicals to control weeds in sugarcane fields has become standard procedure in the Louisiana sugarcane industry in the past five or six years. The effective control of Johnson grass has been the most pressing weed control problem on a large number of plantations, and generally still is. For this reason research has been directed toward more efficient and cheaper methods of controlling this pest, and recommendations stress the control of Johnson grass.

## Johnson Grass Control

*Fallow Plowing*: Where fields are infested with Johnson grass there is no substitute for fallow plowing to kill the large plants and rhizomes from the preceding stubble crop. This requires six to eight thorough plowings and should be done on all land to be planted to sugarcane where Johnson grass is a problem.

*Plant Cane Crop*: In most areas where Johnson grass occurs a chemical control program is essential to prevent reinfestation of the plant cane by Johnson grass seedlings. The amount of reinfestation depends primarily on the number of seed in the ground. This varies from plantation to plantation, but usually where large amounts of Johnson grass occur in a stubble crop, considerable numbers of seed are produced, and can be expected to reinfest the succeeding plant cane crop.

*Fall Treatment*: (For cane planted August 1 to October 15).

1. Roll or cultipack top of row immediately after planting and covering the cane. This is done to have a smooth firm surface for the chemical spray.

2. Apply one lb. acid equivalent of the amine salt of 2, 4-D on a band 36″ wide on top of the row.

3. Approximately three weeks later, or after a rain, apply 4 to 7 lbs. per acre of sodium TCA (90%) on a band 24″ wide. The rate per acre will depend on the number of Johnson grass seedlings which have escaped the first spraying with 2, 4-D.

4. Cultivate the middles and sides of rows as needed.

5. One rogueing to remove Johnson grass plants coming from rhizomes which have survived the fallow plowing program or from seedlings which have escaped the chemical spray is recommended.

*Spring Treatment*:

1. Apply 4 lbs. sodium TCA (90%) on drill in 24″ to 30″ band immediately after shaving and offbarring.

2. Apply the same amount of sodium TCA as above plus 1 lb. acid equivalent of the amine salt of 2, 4-D on drill in 24″ to 30″ band, one month later or immediately after fertilizing.

3. Rogue as necessary to remove Johnson grass plants which have escaped the control program.

4. Apply 2 lbs. acid equivalent of the amine salt of 2, 4-D as a blanket spray (the whole area) immediately after layby.

5. A careful rogueing of Johnson grass plants after layby has been found to be of value.

## Stubble Cane

The following program is recommended in stubble cane known to be badly infested with Johnson grass, and all stubble cane from plant cane in a Johnson grass control program.

1. Shave, offbar, and if possible use a rotary hoe or stubble digger.

2. Apply 11 lbs. of sodium TCA (90%) plus 1 lb. acid equivalent of the amine salt of 2, 4-D in a 24″ to 30″ wide band on the drill. To be effective this spraying should be made immediately after shaving and

# 1957 FERTILIZER RECOMMENDATIONS FOR SUGARCANE

*(Prepared jointly by M. B. Sturgis and David Byrnside of L.S.U. and Lester Davidson of the U. S. D. A.)*

To plant cane on light and medium textured soils apply 40 to 60 pounds of nitrogen per acre by use of any of the common carriers. On heavy textured soils apply 60 to 80 pounds of nitrogen. Where the green weight of legumes turned under ahead of plant cane is as much as 8 to 10 tons per acre, it is not necessary to fertilize cane. In most cases the yields of legumes are not this high. Where poor legume growth has been obtained before plant cane, response to $P_2O_5$ and $K_2O$ additions could be expected.

On stubble cane on the medium textured to heavy alluvial soils of the Mississippi or Red River bottoms, use 80 to 100 pounds of nitrogen per acre. Where known deficiencies of phosphorus and potassium exist, which is usually in the very fine sandy loam and silt loam types, 25 to 40 pounds of $P_2O_5$ and 40 to 60 pounds of $K_2O$ should be applied in addition to nitrogen. In some cases the plant food may be supplied by the application of 300 to 500 pounds of 6-8-12, 10-5-10, or 0-10-20 per acre supplemented with 50 to 100 pounds of nitrogen from either solid or liquid materials.

To stubble cane on the medium to light textured soils of the Pleistocene Mississippi terraces, which areas are largely west of the Teche and include the Richland, Olivier, and Iberia series, apply 80 to 100 pounds of N, 25 to 40 pounds of $P_2O_5$, and 40 to 60 pounds of $K_2O$.

Nitrogen may be supplied from any commonly available solid or liquid materials. Where anhydrous ammonia is being used to supply nitrogen, minerals may be applied either before the ammonia or in the same operation from hoppers mounted on the sides of the tractor. The practice of splitting applications of nitrogen to stubble cane on medium textured soils where as much as 80 or more pounds of nitrogen is applied is proving profitable in some cases. Half of the nitrogen can be applied four inches deep in the middles at the last cultivation. Ammonia and other highly soluble carriers of nitrogen are especially adaptable to split applications.

Over a period of years the highest efficiency in extra production of sugar cane from fertilizer nitrogen has been one ton of cane for each increment of 6 pounds of nitrogen. Where phosphate and potash were needed for sugar cane, the addition of 40 pounds of $P_2O_5$ and 60 pounds of $K_2O$ per acre increased the yield of cane 5 tons per acre above the use of 60 to 100 pounds of nitrogen alone.

---

offbarring and before the Johnson grass rhizomes have sprouted. Three nozzles per row should be used in spraying. The two outside nozzles should be adjusted to cover the sides and the bottom of the bar furrow.

3. If needed, apply 4 to 5 lbs. sodium Dalapon (85% Dowpon) after the cane is fertilized and when the Johnson grass is 10″ high or less.

4. Apply 2 lbs. acid equivalent of the amine salt of 2, 4-D per acre as a blanket spray immediately after layby.

**Spot Treatment**

Spot treatment rather than the above program is recommended where an average of one stool of Johnson grass is seen heading every 50 ft. or less of row and seedlings are known to be relatively few.

1. Apply 1 lb. acid equivalent of the amine salt of 2, 4-D per acre on 24″ to 30″ band on drill, either after shaving, or if cane is not shaved, early in the season or when offbarr-

(Continued on next page)

ing is done.

2. Spray the Johnson grass plants when they can be seen above the cane, with one of the four following solutions:

a. 1 to 1½ lbs. of sodium chlorate plus ½ to ¾ lb. of calcium chloride per gallon of water.

b. ¾ lb. of 90% sodium TCA per gallon of water.

c. ¼ lb. of 85 % sodium Dalapon per gallon of water.

d. ½ lb. of TCA plus ¼ lb. of Dalapon.

Any of the above solutions will kill Johnson grass plants. It is necessary that the Johnson grass plants be covered with the spray solution.

### DITCHBANKS AND HEADLANDS INFESTED WITH JOHNSON GRASS

1. Spray at the rate of 600 pounds per acre of sodium chlorate plus 300 lbs. of calcium chloride in 400 gallons of water. Spray when Johnson grass is beginning to flower.

2. Spot spray with the same strength solution any plants which were originally missed or were not killed by the first chemical treatment.

### CHEMICAL WEED CONTROL IN SUGARCANE WHERE JOHNSON GRASS IS NOT A PROBLEM

In areas where Johnson grass seedlings are not a big problem but other grasses and broadleafed weeds occur, the recommendations for Johnson grass seedling control in plant cane using the TCA, 2, 4-D treatment gives good results.

In areas where grass is not a problem and broadleafed weeds are the main problem, follow the same steps recommended for Johnson grass sedling control using 2, 4-D alone, and leaving TCA out of the spray solution.

Where Johnson grass seedlings, Johnson grass rhizomes, and Bermuda grass are not a problem, Karmex W has given good results.

Karmex W is not selective in that seedlings of both broadleafed weeds and grasses are controlled. It is effective as a pre-emergence spray and should be used where cane is shaved. If shaving is not practiced, an early application of 2, 4-D at 1 lb. per acre should be made in January or early February before the Karmex W is used. An application of 1¼ lbs. per acre of 80% Karmex W should be used on the drill (24″ to 30″ wide), after shaving and offbarring, and before the weed seedlings have appeared. A layby spray of 2 lbs. of 2, 4-D (covering the entire area) should also be applied.

Karmex W is not water soluble and unless there is a mechanical agitator in the sprayer, and larger nozzle tips and screens are substituted for those normally used, trouble will very likely be encountered in its application. Also 20 to 25 gallons of water per acre should be used. The changes needed are given in the manufacturer's recommendations.

### DALAPON (Sodium 2, 2-dichloropropionic Acid

Among several chemicals tried on a field scale in the 1955 and 1956 growing seasons, Dalapon stood out as a herbicide for killing Johnson grass in stubble cane. It also appeared promising in controlling Bermuda grass.

Experiments made from 1954 through 1956, indicated that the application rate of Dalapon for effective Johnson grass control in stubble cane was from 4 to 5 lbs. of the commercial product (85% sodium salt). Dalapon was toxic to sugarcane in all tests where over 6 lbs. per acre of the chemical were used on the drill. The tests from 1954 through 1956 also indicated that better results were obtained with Dalapon when applied following an early application of 11 lbs. of TCA when the stubble cane was shaved and offbarred. One application of Dalapon at 4 lbs. per acre when applied after the Johnson grass had sprouted in the stubble gave good

results in killing Johnson grass in most of the tests. The germination of stubble cane is retarded when Johnson grass is present and this prevents the early suckering of the shoots and reduces the number of stalks per acre with a corresponding reduction in yield.

In tests where the stubble cane was shaved, offbarred and sprayed with 11 lbs. of TCA plus 1 lb. of 2, 4-D the cane germinated and suckered well, as the TCA held back the Johnson grass until May or about the time fertilizer was applied. In some years the TCA treatment has given a very high level of control, while in other years its effectiveness has been reduced by dry weather. If Johnson grass has come in after the TCA treatment, Dalapon at 4 to 5 lbs. per acre should be applied.

A late application of 2 to 2½ lbs. of 85% Dalapon has given good results when applied on plant cane for control of Bermuda grass, redroot or red bottom grass, as well as other grasses. The center nozzle should be closed or removed from this application and the two outside nozzles adjusted to direct the spray on the grass and not on the tops of the sugarcane.

### Wild Lettuce

In recent years the weed known as wild lettuce has been increasing on many sugarcane farms. Research has been started on the control of this weed by the Department of Plant Pathology. While considerably more data are needed, preliminary trials indicate Silvex will give better control than other chemicals tried. If interested in trying this chemical in the control of wild lettuce 1 lb. or 1 quart should be applied when the wild lettuce is 10 to 12 inches high. This amount of Silvex is safe in sugarcane. A repeated application of the same material at the same rate may be needed under some conditions. The material may be purchased under the trade names of Kuron, Propon 4 and possibly others.

## CAUTION IN USING CHEMICAL HERBICIDES

It must be remembered that all herbicides are more or less toxic to plants.

2, 4-D is a particularly dangerous chemical when used carelessly. Many plants such as cotton are very sensitive to 2, 4-D and can be injured by drift from spray solutions used in cane fields. The use of 2, 4-D in cotton growing areas should be restricted to early spring before cotton is planted or to the fall after cotton has been harvested.

Sodium chlorate is flammable and is hazardous when used carelessly. It should never be used unless calcium chloride is added as a safener. Smoking or open flames should not be permitted around sodium chlorate, and clothing should be changed after use of this chemical.

TCA will burn the skin when not diluted. Care in handling this chemical is important. Spray equipment should be thoroughly washed after each spray application is made.

Dalapon is a very strong herbicide and excess amounts in sugarcane may cause severe stunting. Great care must be taken in applying only the amounts recommended. Also the time of application is important. Johnson grass should be 8-12 inches high when Dalapon is applied to stubble cane. The Johnson grass should not be in bloom when Dalapon is used. Also, since Dalapon does not control broadleafed weeds, 2, 4-D should be used with it.

## SUMMARY

### Johnson Grass Control in Sugarcane

### Plant Cane

*Fall treatment*

1. Roll or pack the tops of the rows after planting and covering.
2. Apply one pound or 1 quart of Amine 2, 4-D (40% acid 2, 4-D).
3. Apply 4 to 7 pounds of sodium TCA (90%) after a rain if needed.
4. Cultivate the sides of the rows and remove Johnson grass plants

(Continued on next page)

that have survived the fallow plowing and chemical program.

*Spring treatment*

I. Apply 4 pounds sodium TCA on the drill immediately after shaving and offbarring.

2. Apply 4 pounds sodium TCA plus 1 lb. acid equivalent 2, 4-D one month later or immediately after fertilizing.

3. Remove missed plants and apply a layby spray of 2 lbs. 2, 4-D blanket (the whole area) after layby for tie-vines and broadleaf weeds.

### Stubble Cane

1. Shave, offbar, and spray with 11 lbs. of sodium TCA (90%) plus 1 lb. acid equivalent 2, 4-D on the drill.

2. Apply 4 to 5 lbs. of Dalapon after the cane is fertilized and the Johnson grass is not over 8 to 10 inches high.

———o———

## WEEKLY AVERAGE PRICES

The weekly average prices issued by the Louisiana Sugar Exchange since the start of the 1956-57 pricing period have been as follows:

Week ending October 11, 1956
Raws 6.15, Blackstrap 21.20
Week ending October 18, 1956
Raws 6.17, Blackstrap 22.00
Week ending October 25, 1956
Raws 6.24, Blackstrap 23.30
Week ending November 1, 1956
Raws 6.40, Blackstrap 23.96
Week ending November 8, 1956
Raws 6.225, Blackstrap 24.00
Week ending November 15, 1956
Raws 6.18, Blackstrap 24.75
Week ending November 22, 1956
Raws 6.17, Blackstrap 25.42
Week ending November 29, 1956
Raws 6.29, Blackstrap 27.00
Week ending December 6, 1956
Raws 6.38, Blackstrap 27.00
Week ending December 13, 1956
Raws 6.31, Blackstrap 27.00
Week ending December 20, 1956
Raws 6.26, Blackstrap 27.00
Week ending December 27, 1956
Raws 6.28, Blackstrap 27.00
Week ending January 3, 1957
Raws 6.31, Blackstrap 27.00
Week ending January 10, 1957
Raws 6.34, Blackstrap 27.00
Week ending January 17, 1957
Raws 6.37, Blackstrap 27.00
Week ending January 24, 1957
Raws 6.22, Blackstrap 27.00
Week ending January 31, 1957
Raws 6.12, Blackstrap 27.00
Week ending February 7, 1957
Raws 6.01, Blackstrap 27.00
Season's Average Through February 7, 1957
Raws 6.246, Blackstrap 25.6461

———o———

## IN WASHINGTON

(Continued from page 133)

Myers said:—

"Before discussing the matter of reserve supplies which concerned you, I think it is worth while to note the supplies that are on hand and that are assured, if buyers want them, under the present quotas. Final figures on stocks at the beginning of the year will not become available for several weeks, but the preliminary ones are good enough for practical purposes. Because of the buying movement last fall it appears that the so-called invisible inventories were increased during 1956 by at least 200,000 to 250,000 tons. The invisible inventories cover stocks held by industrial users, wholesalers and retailers. In addition, it appears that refiners' stocks of quota sugar were 50,000 tons larger on January 1, 1957, than they were a year earlier. Therefore, stocks already on hand could satisfy an increase of around one-quarter million tons in actual consumption in 1957.

"Next our present quota, totaling 9,000,000 tons, should permit a further building up of around 200,000 tons in stocks by the end of 1957. Whether or not this additional stockpiling occurs will, of course, be dependent upon the attitude of domestic consumers and distributors between now and the end of the year. The important point is that the supplies are provided for under the present quotas and will be im-

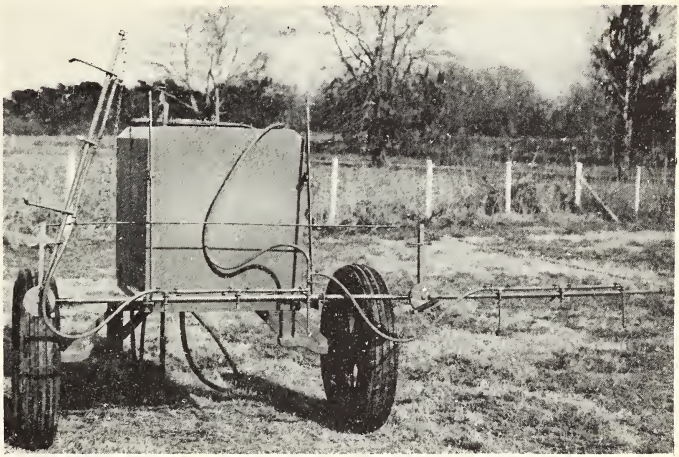
(Continued on page 140)

# ANOTHER HIGH QUALITY VALOIS WEED SPRAYER

This new model 215-gallon power-take-off Valois Weed Sprayer was designed in 1955 at the request of many cane farmers who desired the special features it offers.

It is constructed of the same high quality material as is our reliable 400-gallon Master Model.

Many cane farmers bought and used this new model sprayer in 1956 with complete satisfaction. There is no engine trouble, and its simplicity in construction and operation makes it foolproof. One of these sprayers will easily take care of a crop of better than 300 acres of cane.



(Rear view showing arrangement and folding of spray boom)

**ITS SPECIFICATIONS ARE:**

1. **Tank**—215-gallon capacity, constructed of 11 gauge steel, and is metalized to prevent corrosion.
2. **Pump**—It has a Hypro, Ni-Resist, 10 G.P.M., power-take-off pump. Can be easily and quickly installed on any cane tractor. Fits any cane tractor PTO shaft.
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4. **Controls**—The regulator and gauge are easily accessible to and in clear view of the tractor operator. No sprayer operator is needed; it's a one-man operation.

This sprayer is standardly sold without riding gears at a remarkably low price. Only a limited number of this new model sprayer is available for 1957. We can make immediate delivery as long as the supply lasts.

(Front view showing PTO pump attachment and controls)

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**NAPOLEONVILLE, LA., U.S.A.** **PHONES: 2251 OR 6011**

## IN WASHINGTON

(Continued from page 138)

ported and marketed if domestic buyers are willing to buy them.

"You also asked about the prospect for supplies from our domestic areas and from the Philippines. It is anticipated that the Philippines will not only fill their United States quota but that they will have in addition around 100,000 tons for sale on the world market.

"Each of the four major domestic areas, i.e., the beet area, the mainland cane area, Hawaii and Puerto Rico are expected to have more than enough sugar to fill their quotas. The surpluses, which amount to reserves for future increases in requirements, are expected to be small for Hawaii and Puerto Rico but they will be large for the mainland cane and beet areas. The bulk of the additional supplies from the mainland cane and beet areas will become available after the start of the harvest next fall. It is difficult to estimate the quantity of sugar in excess of present quotas that could be supplied by domestic areas this year. Certainly it could exceed a quarter of a million tons and my belief is that in case of strong need it might reach one-half million tons.

"If you add these inventories, quota supplies and reserve supplies together, I am sure you will agree that the needs of the domestic consumer are most adequately provided for. They could be exhausted through an unprecedented hoarding movement. Such movement, if it were to come at a time when supplies are seasonally short, might be embarrassing but if it were to start now when the Caribbean harvest is just getting underway and when our mainland supplies are near their seasonal peak, could result in little more than a shift in carrying charges from suppliers to consumers. I doubt that consumers will wish to assume the burden of unnecessary carrying charges, but if they do I am satisfied that the sugar will be available for them."

### Beet Marketing Hearing Postponed

The 1957 Beet Marketing Allotment Hearing which began in Dallas, Texas, January 30, 1957 will reconvene in Washington, February 18, 1957. After several days of apparently fruitless conversations with Department of Agriculture officials the beet processors could reach no agreement on the formula proposed by the government for allotting the 1957 quotas to individual mills. The problem for beet processors this year is aggravated by the recent increases in beet acreage authorized by the Department. On January 3, 1957 the Department upped the beet acreage from 885,000 acres and on January 11, 1957 made a further increase which brought the beet acreage up to a total of 950,000 acres.

———o———

## UP FRONT

(Continued from page 131)

ing to be worse in 1957 unless they get some quick relief from the recent panic-induced quota increase."

### Ticker Watchers

As anyone who has to watch it will vehemently testify, the job of keeping track of trading in the future markets has been no bed of roses during the past couple of months. People have been buying and selling "world" sugar futures at a fantastic rate and the "ticker watchers" have pulled up bug-eyed trying to keep up with the goings on.

The brokerage firm of Lamborn & Co., Inc., who keep track of such things, said the following in their market report of February 5th.

"Trading volume in the World (No. 4) Futures Contract during the month of January this year aggregated 1,074,200 tons, a figure which has not been surpassed since the late 1920's. When the volume for the Domestic (No. 6) Futures Contract during the same January period of 347,000 tons is taken into consideration, making an overall to-

(Continued on page 142)

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You can make your sugar cane production more profitable, and save labor with Du Pont "Karmex". That's because just one application of "Karmex"—at low rates—kills Johnson grass, seedlings, crabgrass, and other weeds, and effectively prevents their regrowth for weeks. The long-lasting, residual effect of Du Pont "Karmex" makes this labor-saving, efficient performance possible.

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*On all chemicals, follow label instructions and warnings carefully.*

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BETTER THINGS FOR BETTER LIVING . . . **THROUGH CHEMISTRY**

## UP FRONT

(Continued from page 140)

tal volume figure of 1,421,200 tons traded, we have to go back to June, 1929, before a greater single month's volume figure is recorded. At that time, under the single contract then traded, volume reached 1,628,400 tons."

Now we know why this electronic monster we have starts the day ticking and ends it pounding.

### International Sugar

Because of the strength being shown by "World" sugar, which is still worth about sixty cents a hundred pounds more to the Cubans than U. S. Quota sugar, developments concerning the world market have more than just a passing interest.

The International Sugar Council met in London during the last three days of January and came up with the following recommendations:

(1) To call upon participating exporting countries listed in Article 14(1) of the Agreement to immediately release for export to the free market the minimum stocks held by them under Article 13 of the Agreement;

(2) That without prejudice to the method for restoring quotas should the price fall below 3.90 cents the exports made by any country up to the next meeting of the Council shall not be charged against its quota when quotas become operative;

(3) Pursuant to Article 9 of the Agreement, to call on participating exporting countries to take all possible measures to ensure that the requirements of participating importing countries are met as a first priority;

(4) To recommend that, during the period in which the quotas are inoperative, each participating exporting country shall, whenever possible, postpone importation of sugar from other participating exporting countries.

### Gibberellic Acid

When Lloyd L. Lauden returned from his January visit to the Canal Point, Florida, USDA Sugar Cane Field Station, he told about the use of gibberellic acid in a growth stimulating experiment at the Station. The Public Relations Department of S. B. Penick & Company has sent us the following press release concerning this product which we are glad to pass on to our readers.

"The availability of the new plant-growth stimulant, gibberellic acid, was announced today by S. B. Penick & Company, New York. Initial work indicates that on certain flowers and ornamentals, gibberellic acid will stimulate stem length and lateral growth, accelerate stem growth on cuttings, increase profusion of blooms, stimulate earlier blooming, promote flowering of plants tending to remain in the vegetative stage, and induce flowering of biennials in the first year. Favorably affected were such plants, shrubs and trees as African violet, begonia, Boston ivy, dahlia, geranium, holly, hydrangea, juniper, red-leaf Japanese maple, petunia, Virginia pine, poinsettia, and salvia."

"Gibberellic acid was isolated by Japanese scientists working on the prevention of a rice disease. Further work by U. S. agricultural scientists indicated that in only three to four weeks plants treated with the chemical grew three times as tall as comparable untreated plants."

"Further information about gibberellic acid may be obtained from S. B. Penick & Company, 50 Church Street, New York 8, N. Y."

———o———

## IN THE FIELD

(Continued from page 132)

cent more seed with the higher rate of nitrogen.

(6) The increase in planting material came from both a greater number of stalks per acre and from more "eyes" per stalk of cane in the fields receiving the high nitrogen application.

This experiment was begun in 1949 and continued through 1952. The highest rate of fertilizer used during the experiment was 300 pounds of nitrogen per acre. The other rate of nitrogen used in the experiment was 60 lbs. of nitrogen per acre.


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| G-50<br>G-134 | Very early | 1-2 | Very low | Light | For early hogging off, early roasting ears, early feed. Plant early on well drained soil. Plant thick. |
| G-740<br>G-737A | Late | 1-2 | Medium | Very heavy | Outstanding varieties for sugar beet. Have good weevil resistance, strong stalks, and high yields. G-740 is especially adapted for mechanical harvesting. |
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in the interests of the Domestic Sugar Cane Industry

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Lloyd L. Lauden, Agronomist and Field Representative

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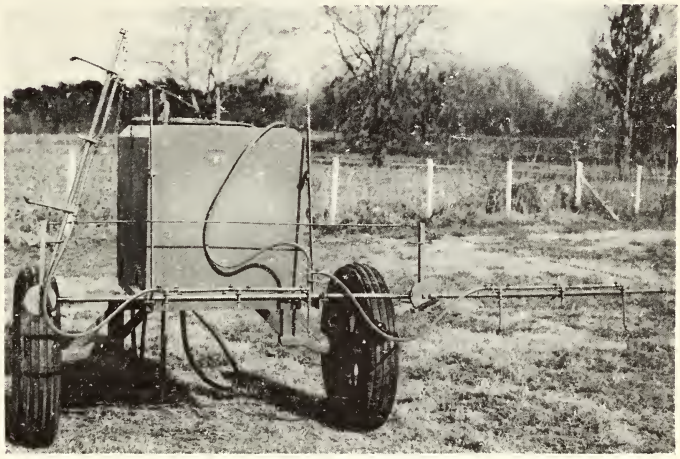
This new model 215-gallon power-take-off Valois Weed Sprayer was designed in 1955 at the request of many cane farmers who desired the special features it offers.

It is constructed of the same high quality material as is our reliable 400-gallon Master Model.

Many cane farmers bought and used this new model sprayer in 1956 with complete satisfaction. There is no engine trouble, and its simplicity in construction and operation makes it foolproof. One of these sprayers will easily take care of a crop of better than 300 acres of cane.



(Rear view showing arrangement and folding of spray boom)

**ITS SPECIFICATIONS ARE:**

1. **Tank**—215-gallon capacity, constructed of 11 gauge steel, and is metalized to prevent corrosion.
2. **Pump**—It has a Hypro, Ni-Resist, 10 G.P.M., power-take-off pump. Can be easily and quickly installed on any cane tractor. Fits any cane tractor PTO shaft.
3. **Boom**—It has a 3-row boom that can be lowered or lifted to any desired height. The two outside row sections of the boom carry a sliding attachment for spraying of various width rows. The two side sections fold upward for easy passage through gates, roads, and for easy storage.
4. **Controls**—The regulator and gauge are easily accessible to and in clear view of the tractor operator. No sprayer operator is needed; it's a one-man operation.

This sprayer is standardly sold without riding gears at a remarkably low price. Only a limited number of this new model sprayer is available for 1957. We can make immediate delivery as long as the supply lasts.

(Front view showing PTO pump attachment and controls)

SEE OR CALL

## ASSUMPTION FARM SUPPLIES & CHEMICALS CO.

**NAPOLEONVILLE, LA., U.S.A.** **PHONES: 2251 OR 6011**

# UP FRONT WITH THE LEAGUE

*by A. W. Dykers*

## The Old Mule

The Old Mule is still bogged down in an avalanche of sugar, 9,000,000 tons of it, and is well stuck. There seems to be little doubt that somebody is going to have to grab a shovel—but who?

The driver deliberately maneuvered him into his present miserable state and apparently is quite content, so an appeal to a higher authority seems in order.

The Louisiana Sugar Producers' Club (Western Division) sent the following letter to Senators Ellender and Long, and Congressmen Boggs and Willis on February 18th.

"The Louisiana Sugar Producers Club (Western Division) has directed that I write you concerning the price of sugar. We believe this letter reflects the veiws of sugar cane growers and processors in general.

On January 11, the United States Department of Agriculture increased the total sugar quota for the United States to 9,000,000 tons. This increase was not needed and knocked the price of sugar down about 30 points.

Unless the Department immediately corrects the mistake it made, the sugar price will probably stay at its disastrously low level (or lower, heaven forbid) and result in uncalled for losses to sugar cane and sugar beet growers and processors. Immediate corrective action is needed because the pricing season for the 1956 Louisiana crop ends April 25. A price rise after that date will not increase the price growers receive for their 1956 crop of cane. Also, practically all 1956 crop sugar in Louisiana will be sold by that date.

There is ample justification and authority for the Department to allow sugar prices to increase. According to the formula in Section 201 of the Sugar Act, the *fair* price for refined sugar at wholesale in New York is $9.45 per cwt. The actual price at present is $9.10. Today's New York spot price for raw sugar is $6.10 per cwt. as compared to $6.32 in 1947. While the price of our raw sugar has gone down since 1947, the prices of things we buy and wages we pay have gone up more than 40 per cent.

We do not know why Mr. Lawrence Myers, Director of the U.S. D.A. Sugar Division, takes the arbitrary stand that the price of sugar should not advance according to the formula in the Sugar Act. He is denying us the privilege of sharing in the general prosperity existing in this country while the big industrial users of sugar continue to prosper at our expense.

Anything you can do to alleviate this unbearable situation will be greatly appreciated. An immediate cut in the total sugar quota is needed.

With best wishes, I am

Sincerely yours,
M. L. Marquette, President"

## Acreage Hearing

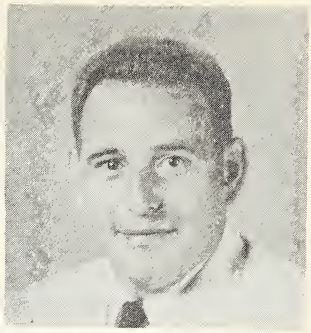
The Proportionate Shares Acreage Hearing is scheduled for March 15th this year in the Monteleone Hotel, New Orleans.

Although we have not as yet received the official announcement of the Hearing from the U.S.D.A., we presume that Hebert Folken will be the Government witness and that

(Continued on page 156)

# IN THE FIELD WITH LLOYD LAUDEN

*by Lloyd L. Lauden*



## Contact Committee Meeting March 12, 1957

Look at the program listed below:

PROGRAM

9:30 - 10:00
Cost Studies. Dr. J. R. Campbell.

10:00 - 10:30
Fertilizer Studies and Recommendations. Mr. David Byrnside and Dr. M. B. Sturgis.

10:30 - 10:45
Recess

10:45 - 11:10
Sugarcane Breeding. Dr. R. D. Breaux.

11:10 - 11:35
Sugarcane Weed Control. Mr. E. R. Stamper.

11:35 - 12:00
Ratoon Stunting Disease of Sugarcane. Dr. R. J. Steib and Dr. I. L. Forbes.

12:00 - 1:30
Noon Recess

1:30 - 2:10
Agricultural Engineering Investigations. Mr. I. L. Saveson, Jr., Mr. Z. F. Lund. Mr. M. M. Mayeux and Mr. W. H. Carter.

2:10 - 2:40
Seed Production and Flowering of Sugarcane. Dr. S. J. P. Chilton.

2:40 - 3:00
Insect Investigations. Mr. E. A. Concienne and Dr. L. D. Newsom.

3:00 - 3:30
Test Fields. Dr. T. J. Stafford.

3:30 - 4:00
Sugarcane Varieties. Mr. E. C. Simon.

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Each and every subject listed is of vital importance to every sugarcane grower in Louisiana.

Do you know all there is to know about all the subjects listed in the program? Do you know each man listed on the program? They are not on your payroll, but they do work for you. Through research these men and their colleagues at L.S.U. and at the U.S.D.A have guided the Louisiana sugar industry to higher yields. Hear from them the latest findings of research.

If you want to know about the work these men do for you, plan now to attend this all important meeting. The meeting will be held in Baton Rouge on March 12 in the new Agricultural Extension Building on the L.S.U. campus.

Dr. Charles Upp, Director of the L.S.U. Agricultural Experiment Station, and Mr. Stephen C. Munson, Chairman of the League's Contact Committee, invite every Louisiana sugar cane grower to attend this meeting. Get together with several neighbors, drive to Baton Rouge and attend the meeting. Give up one day of your time from the farm. It will be a day profitably spent.

Not only will you hear present recommendations from the men doing the work, but you will also hear about the new research in progress, about things you may be using in the future.

Attend the meeting to learn and at the same time prove to these men that you are interested and appreciate the work they are doing for our industry. A good crowd at the meeting will make them know they are wanted and needed.

# RIGHTS OF WAY THROUGH SUGAR CANE LANDS

At a recent meeting of the Gulf States Chapter of the American Right of Way Association held in New Orleans, F. A. Graugnard, Jr., President of the League, addressed the members of that association, at their request, on the subject of "Rights of Way through Sugar Cane Lands". In view of the many rights of way, particularly for pipe lines, which traverse South Louisiana, and the number of which will greatly increase with the industrial growth of that area, all sugar cane producers will be interested in many of the observations and suggestions contained in President Graugnard's address. There are quoted below those portions of President Graugnard's address which should be helpful to a sugar cane producer in any negotiations with respect to a right of way across his property.

**Relationship with Land Owner**

The sugar cane farmers realize destiny has decreed that the industries which you represent and the farmers must dwell together. By your very nature, we must share with you the usage of certain of our property.

Let us look at the problem frankly and realistically. In some instances the land owner derives a direct personal benefit from a power line, a pipe line, utility line or highway. In such cases his problem and yours are not so difficult. However, in most instances, and this is particularly true as to pipe lines, the land owner has no personal interest in the right of way and no possibility of profiting therefrom. For instance, the average Louisiana farmer is not interested in a 30 inch pipe line being constructed to pipe gas from East Texas to some industrial center remotely located from him.

Therefore, usually we do not have the conjugal relationship voluntarily entered as between a husband and wife. Further, it is not the relationship normally existing between two business men, voluntarily entering an agreement mutually desirable and mutually profitable. It is not the relationship normally incident to that of a willing buyer and a willing seller. To the contrary, it is a relationship which is thrust upon us by the circumstances of the needs of others and of our land ownership. Under such circumstances and with such relationship, if each of us does not have a clear understanding of the problems of the other and of all of the facts, neither of us can hope to enjoy a happy courtship nor a pleasant community of interests.

**Improvement of Relationship**

My first observation relating to an improved relationship should perhaps be considered as an urgent recommendation to you and your principals. On this point, I am sure I speak for every sugar cane farmer operating in the State of Louisiana.

I have never seen your Engineering Department lay out a right of way. But from the lines as actually run in most instances, the method is obvious. A large map or aerial photograph is examined; the line must be run from point A to point B; the engineers draw a straight line between these two points, and the resulting line is the line of the right of way. I fully appreciate that a straight line is the shortest distance between two points. However, in terms of a pipe line or power line right of way through crop lands, such planning is definitely not the best way.

Obviously, your rights of way must cross some crop land. However, the crop land acreage could be materially reduced and the damage and inconvenience to the land owner greatly minimized through proper preliminary investigation and planning on the part of your principals.

Wherever possible, every effort should be made to avoid crop land. Where crop land must be crossed, your engineers should as far as pos-

sible follow the line of roads, headland, ditches, canals or other gaps in the cropland acreage.

I am familiar with a number of instances where, on the request or insistence of landowners, right of way lines have been changed in order to avoid destruction of crops and crop land. Such changes entail delays, needless expense and probably other complications. This could be easily avoided by preliminary inspection of the land and consultation with the land owners in advance, so that the route as originally laid out would result in the least possible damage and inconvenience.

I say in all good humor, but with complete frankness, and I believe you will agree, that where the land owner has nothing to gain through the grant of the right of way, and the use of his land is either through his friendly cooperation or by legal compulsion, he is entitled to full consideration in selecting a reasonable location for the right of way on his land.

Your task will be greatly simplified if the line of the right of way across the land owner's property has been intelligently planned, as I have indicated. It is well to fully explain to the land owner who you are, who your principals are, the necessity for the right of way, and the benefits to be derived therefrom. If the landowner will, or may, derive any benefit from the pipe line, utility or highway to be constructed, clearly point this out. Explain to the land owner that your company desires to work cooperatively with him, to cause the least possible damage and inconvenience. Impress upon him that you do understand his property is valuable and that your principal expects to pay a fair price for the right of way, and to fully recompense him for any damage he may suffer. May I particularly admonish you, do not remind him of your right to expropriate his property. This should be resorted to only when all other means have failed. The land owner, at least likes to think he is trading with you on a free market and without duress or compulsion.

### Value of Right of Way and Damages

Because of the wide differences in the character, location, productivity, usage and potential usage of sugar cane crop land, there is no standard or criterion of value which may be applied in all cases. Aside from all other considerations, there is a wide variation in value of sugar cane crop land because of the character and quality of the soil. Other than the natural characteristics of the soil, many farmers have greatly enhanced the value of their land through intelligent and scientific farming practices, such as drainage, fertilization, fallow plowing, weed and grass control and proper crop rotation. All of these factors must be considered in arriving at values and damages on the particular tract of land which you will traverse.

In addition to these conditions, another condition has very recently arisen which has had an even greater effect on the value of our lands. I refer to the industrialization of South Louisiana, with which you are, of course, familiar. Land values today in a major portion of the Louisiana sugar cane producing area have been dramatically influenced by the acquisition of industrial sites and potential industrial sites and the many facilities which follow such industries. These sites have been purchased at almost fabulous prices, in terms of value as recognized in the past. In a relatively short period of time, I anticipate this will be true as to the entire Louisiana sugar area. But here again, there is no uniformity in the influence on value asserted by this industrialization. It will widely fluctuate between locations.

The value of planted sugar cane, or the damages resulting from the destruction of a crop through right of way operations, must be properly assessed in satisfactorily work-

(Continued on next page)

ing out a right of way agreement. There is, also, a complete lack of uniformity here.

The value of any acre of sugar cane can only be determined by considering the expected yield of sugar cane from that particular acre. Yields vary from area to area, from farm to farm, and even from tract to tract on a particular farm. The average yield of sugar cane in Louisiana from the 1955 crop was 24.4 tons per acre. However, during that year some farmers averaged more than 40 tons per acre.

As a result of more scientific farming practices which I have mentioned, and the use of improved varieties of sugar cane, sugar cane yields in Louisiana today are increasing and should continue to increase. Therefore, in estimating yields, for the purpose of computing damages, we must look ahead and not look back.

The value of a ton of sugar cane varies from year to year. The price received by the farmer from the processing mill is based on a formula established by the United States Department of Agriculture pursuant to the provisions of the Sugar Act. Under this formula, the farmer receives a price which is directly related to the price of a pound of raw sugar during the current marketing season. In addition, the farmer is paid by the mill, as a part of the price for his sugar cane, what is termed a "molasses bonus". This bonus is based on the price of blackstrap molasses, which is the residuary product in the manufacture of raw sugar. The farmer also receives from the government the conditional payment which I have mentioned. This payment is based on recoverable sugar from the sugar cane marketed from a farm. The amount of this payment is scaled by law from 80¢ per hundred pounds of recoverable sugar, received by the smallest farmer, down to 30¢ per hundred pounds received by the largest farmer on most of his production. The average amount received by the Louisiana growers, from all sources, between the years 1950 and 1955, has varied from a high of $9.17 per ton of sugar cane to a low of $7.41 per ton.

A significant factor which must be considered in evaluating damages resulting from the destruction of sugar cane, is the fact that this crop is not planted each year. In Louisiana we plant sugar cane on a portion of our acreage each year, during the late summer and early fall. In the fall of the next following year, beginning in October, we harvest from that planted acreage what is known as plant cane. The roots remain in the ground, and during the second year, after proper cultivation and fertilization, we harvest from the ratoons our first year stubble crop. This practice is normally repeated and during the third year we harvest our second year stubble crop. Although not generally true, on some farms, even sixth and seventh year stubble crops are harvested.

Therefore, in evaluating sugar cane crop damage on any tract of a farm in Louisiana, it is necessary to ascertain whether the crop destroyed in that tract is plant cane or one of the stubble crops. There should then be ascertained the practice of the particular farmer in retaining stubble.

Because of this practice, you will understand that in destroying, say a 60 foot right of way strip through a tract of sugar cane, there is destroyed not one year's crop, but the crop of the current year plus the crop for the number of years remaining in which that tract would normally produce before replanting. This is true, because it is not economically feasible to replant only the 60 foot strip taken for right of way purposes.

This means in evaluating crop damage on the right of way proper, there should be considered the expected yield of sugar cane from the tract destroyed for each of the years in which the land must remain idle

as a result of the right of way operations. If plant cane is destroyed on a tract in which the farmer normally harvests first and second year stubble, the farmer has lost his revenues from that tract for a three year period. The crop damage should be measured accordingly.

Further, in arriving at the farmer's loss, it is not proper to use as a basis his normal average profit per acre or per ton of sugar cane. Such is not proper, for a major portion of the farmer's costs will remain constant and not be reduced by virtue of the destruction of this acreage.

We also strongly feel that when sugar cane acreage which belongs to a sugar cane processor is destroyed, the damages should be based not only on the value of the sugar cane, but also on the loss of profit which is suffered from the inability to process this sugar cane into sugar.

### Incidental Damages

With further respect to damages actually caused in your operations, we must also bear in mind there are items of damage other than damage to the growing crops and improvements actually situated on the right of way. Some of these items are intangible and almost impossible to precisely evaluate, but they nevertheless exist in many cases. I desire to mention a few of them.

We must recognize that efficient and modern farming practices require the use of heavy mechanical equipment and farm machinery, and that in planting, cultivating and harvesting the cuts or squares of sugar cane or other crops to be traversed by the right of way, such equipment and machinery must repeatedly cross and recross the right of way. In view of these facts, if as a result of operations on the right of way, the farmer is prevented from crossing and re-crossing the right of way with his machinery and equipment he may be prevented from planting, cultivating or harvesting sugar cane or other crops on any square or cut of crop land extending beyond the right of way proper. Such damages or potential damages beyond the rights of way, although not always existent, should be given full consideration.

If the right of way traverses a tract of crop land, and as a result of right of way operations the right of way strip cannot be crossed and re-crossed to carry out normal, efficient farming operations, either time and labor will be lost as a result of taking a longer route around the right of way, or some portion of the crop land will be neglected. In either event, the farmer is damaged.

Further, where a tract or cut of crop land is bisected, the farmer may find it necessary to prepare temporary headlands in these tracts, at a substantial cost to himself. Otherwise, he could not turn his implements and farm machinery around on reaching the end of a row. This heavy machinery cannot be turned around across rows, and it is not feasible to back out of a row. Such additional costs should be anticipated.

Most of our soil is very fertile. However, this is not normally true as to subsoil excavated from a substantial depth. The bringing to the surface of this soil, naturally has an adverse effect on the crops grown on a pipe line right of way during a number of years following the excavation. I cannot evaluate such loss and damage, but it nevertheless exists.

In many cases, the value of an entire farm will be depreciated because of the existence of a right of way and the facilities constructed thereon. This is true, because any user is deprived of the full and free use of a portion of the farm, and he necessarily realizes the existence of the right of way will at some time in the future interfere with the construction of buildings,

(Continued on next page)

with normal agricultural operations, or with some other desirable use, and thereby give rise to damage and inconvenience.

Finally, in discussing damages, may I point out that unless a farmer accepts any proposal made to him, he must devote a substantial amount of time to discussions and negotiations with the right of way man. This time is not time spent by him in a profit venture, but solely in an effort to be made whole and avoid loss. The farmer's time cannot be evaluated and I do not suggest that his lost time be fixed as an element of damages, but we must bear in mind that his time is valuable, and in arriving at an ultimate figure of damage, the right of way man should be liberal in view of this and other intangible considerations. I do suggest, however, that if the land owner feels he should consult his attorney to properly protect his interests, the attorney's fee should be paid by the party who is obtaining the right of way. Otherwise, this fee is a dead loss to the farmer.

### Right of Way Agreements

In granting a right of way, a careful and prudent sugar cane farmer will present to you for your consideration a number of items, at least some of which are not usually found in your standard forms of right of way agreements. I shall recite those items which have occurred to me, and there are undoubtedly others. Of course, some of them would not be applicable to all rights of way, depending on the nature of the rights granted.

Any pipe line should be buried a sufficient depth below the surface to avoid interference with cultivation, and a sufficient depth below the bottom of ditches and canals to avoid interference with drainage.

All trenches which are excavated should be refilled without delay. The spoils should not only be replaced, but the area should be firmly tamped, packed and leveled. This is most important, for settling of the land in excavated areas forms pockets, and has a serious effect on drainage. Further, even when the area is properly packed, the sugar cane farmers have experienced serious difficulty in many instances for several years following excavation, particularly during wet weather. The condition of this disturbed soil causes our heavy equipment to bogg down. In this connection, bear in mind we no longer refer to the mule and plow and wagon, but to heavy mechanical equipment, such as our harvesters which weigh approximately 15,000 pounds and some of which cost as much as approximately fifteen thousand dollars each.

All roads, headlands, bridges, drainage ditches and canals, fences, and other improvements and facilities which are an integral and essential part of our operations, must be restored without delay.

The land owner should be specifically held harmless from and indemnified against any damages which may be caused to others, in the exercise of your rights.

Every effort should be exerted by your principals to avoid actual operations on the right of way during the planting and harvesting seasons, which extend normally from sometimes in August through the month of December. The least objectionable time for such operations would be immediately following the completion of the harvesting.

The right of way agreement should specifically provide for the payment of damages which may result from any additional work on the right of way subsequent to the original construction.

I realize you do, in fact, provide for most of these contingencies; however, if all of these items which I have mentioned, were specifically provided for in your forms of right of way agreement which are presented to the landowners, your task as right of way men would be materially lightened, and misunderstandings and disagreements would

(Continued on page 156)

# SUGAR MARKET STATISTICS THROUGH FEB. 25, 1957

| | Today | 1 Month Ago | 1 Year Ago |
|---|---|---|---|
| QUOTA RAWS DELIVERED NEW YORK | 6.10 | 6.25 | 5.90 |
| QUOTA RAWS DELIVERED NEW ORLEANS | 6.02 | 6.17 | 5.86 |
| WORLD SPOT RAWS (In Cuba) | 5.75 | 6.35 | 3.30 |

SUGAR FUTURES No. 6
(Closing Bid Prices)

| | May | July | Sept. |
|---|---|---|---|
| Today | 5.66 | 5.75 | 5.79 |
| 1 Month Ago | 5.77 | 5.81 | 5.85 |
| 1 Year Ago | 5.42 | 5.51 | 5.54 |

OFFSHORE RECEIPTS AT NEW ORLEANS
(Long Tons, 2,240 lbs.)

| | To Date 1957 | Same Date 1956 |
|---|---|---|
| American | 50,505 tons | 53,476 tons |
| National (Godchaux) | 26,117 tons | 21,427 tons |
| Colonial | 25,250 tons | 29,637 tons |
| Henderson | 16,825 tons | 12,215 tons |
| Southdown | None | None |
| South Coast | None | 3,727 tons |
| Supreme | 6,004 tons | 17,327 tons |
| Totals | 124,701 tons | 137,809 tons |

* Revised


**DOWPON,** also known as 85% **DALAPON,** will permanently kill Johnson Grass, Bermuda, crab grass, red bottom, and other grasses in sugar cane without injuring the cane when applied at the recommended dosages. Experiments conducted for the past three years, and large scale field usage for the past two years have proven **DOWPON** to be the most economical and most valuable chemical weed killer on the market today.

**DOWPON** is as easy to handle and spray as 2-4-D; it is non-poisonous to humans and animals, is non-corrosive, and non-inflammable.

**WHEN ALL OTHER WEED KILLERS FAIL, DOWPON WILL DO THE JOB. IT SHOULD HAVE AN IMPORTANT PLACE IN YOUR WEED CONTROL PROGRAM.**

We can advise you as to **HOW, WHEN, and WHERE** on the use of **DOWPON IN SUGAR CANE.** Feel free to call on us for detailed information on the use of **DOWPON** in sugar cane.

**Your Dow Distributor**

**ASSUMPTION FARM SUPPLIES & CHEM. CO.**

**NAPOLEONVILLE, LOUISIANA**

**PHONES: 2251 OR 6011**

## RIGHTS

(Continued from page 154)

be minimized. The inclusion of such provisions, where applicable, would indicate to the farmer that you sincerely appreciate his problems and desire to make provision for them.

———o———

## UP FRONT

(Continued from page 148)

the meeting probably will commence about 9:30 A.M.

### Feeding

Somehow when we think of feeding we invariably think of a certain chap we see once in a while who is an expert on the subject. It used to be a pleasure to watch this fellow because he was such a happy eater, but now the mealtime smile is gone from his face and there is a grim determination that is saddening to see.

Unlike the *porci* referred to in the following paragraph, our friend is on a reducing diet, and it is about to ruin him. But lets get on with the story about the hogs.

"Weight loss of crossbred market hogs during shipping was markedly reduced in Arkansas Station tests by feeding dark brown sugar in drinking water at rate 3 pounds per 5 gallons of water 48 hours before loading. In one trial with 109 head averaging 209 pounds, the shrink was only 0.65 percent as opposed to 4 percent for hogs that got no sugar water. In carcass tests, liver weights were higher from hogs receiving sugar prior to slaughter. With a dry sugar and dry salt cure, the cuts from hogs fed sugar lost less weight in curing and smoking. A taste panel scored them highly in aroma, flavor, texture and tenderness."

## WEEKLY AVERAGE PRICES

The weekly average prices issued by the Louisiana Sugar Exchange since the start of the 1956-57 pricing period have been as follows:

Week ending October 11, 1956
Raws 6.15, Blackstrap 21.20

Week ending October 18, 1956
Raws 6.17, Blackstrap 22.00

Week ending October 25, 1956
Raws 6.24, Blackstrap 23.30

Week ending November 1, 1956
Raws 6.40, Blackstrap 23.96

Week ending November 8, 1956
Raws 6.225, Blackstrap 24.00

Week ending November 15, 1956
Raws 6.18, Blackstrap 24.75

Week ending November 22, 1956
Raws 6.17, Blackstrap 25.42

Week ending November 29, 1956
Raws 6.29, Blackstrap 27.00

Week ending December 6, 1956
Raws 6.38, Blackstrap 27.00

Week ending December 13, 1956
Raws 6.31, Blackstrap 27.00

Week ending December 20, 1956
Raws 6.26, Blackstrap 27.00

Week ending December 27, 1956
Raws 6.28, Blackstrap 27.00

Week ending January 3, 1957
Raws 6.31, Blackstrap 27.00

Week ending January 10, 1957
Raws 6.34, Blackstrap 27.00

Week ending January 17, 1957
Raws 6.37, Blackstrap 27.00

Week ending January 24, 1957
Raws 6.22, Blackstrap 27.00

Week ending January 31, 1957
Raws 6.12, Blackstrap 27.00

Week ending February 7, 1957
Raws 6.01, Blackstrap 27.00

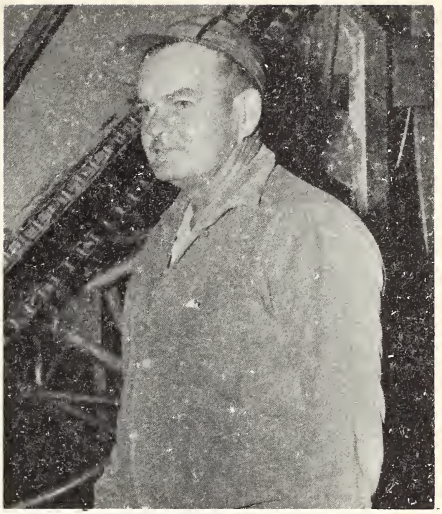
Week ending February 14, 1957
Raws 6.015, Blackstrap 27.00

Week ending February 21, 1957
Raws 6.02, Blackstrap 26.00

Season's Average Through February 21, 1957
Raws 6.223, Blackstrap 25.7315

*R. Bergeron, Gibson, La., reports:*

# Outstanding control of weed and grass seedlings



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**HERBICIDE**

"I have been using Du Pont "Karmex" W as a pre-emergence herbicide on plant cane for the past three years," says R. Bergeron — producer of the highest yield in the plantation class in 1956. He continues: "During this time I have had outstanding control of weed and grass seedlings, with no injury to the cane. In fact, I didn't even have to put a hoe in the more than 200 acres of plant cane I treated with "Karmex" W again this year."

You, also, will save time and labor, and increase yields of healthy cane, by using Du Pont "Karmex" W. For further information, write your nearest E. I. du Pont de Nemours office

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Houston 25, Texas

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Atlanta 8, Georgia

*On all chemicals, follow label instructions and warnings carefully.*

DU PONT
REG. U. S. PAT. OFF.

**Karmex® W**
**HERBICIDE**

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

# CONTACT COMMITTEE MEETING

## Tuesday, March 12th

## 9:30 a. m. - 4:00 p. m.

AGRICULTURAL EXTENSION BUILDING

L. S. U. CAMPUS

Baton Rouge, La.

See Page 149 for Program

*EVERYONE IS INVITED TO ATTEND*

Control Sugarcane Borer
Increase Sugar Yields

**RYAN-O-DUST**

100% Ryania Dust

Costs Less Per Acre

**TRINIDAD RYANIA CORP.**

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•

Main carrier chains and slats
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Feeder table, trash and juice drag chains
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# THE SUGAR BULLETIN

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in the interests of the Domestic Sugar Cane Industry

THE
# SUGAR BULLETIN

414 Whitney Bldg., New Orleans 12

Gilbert J. Durbin, Editor — Andrew W. Dykers, Managing Editor

Lloyd L. Lauden, Agronomist and Field Representative

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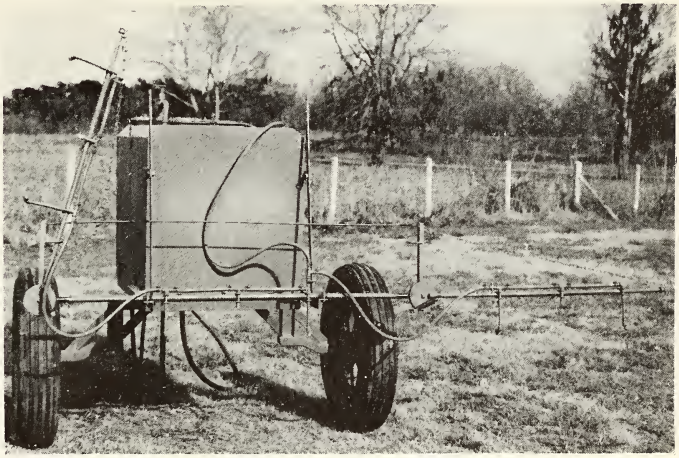

(Rear view showing arrangement and folding of spray boom)

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(Front view showing PTO pump attachment and controls)

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# UP FRONT WITH THE LEAGUE

*by A. W. Dykers*

### Grassl to New Guinea

Dr. H. M. Tysdal, Head of the Sugar Crops Section of the U.S.D.A., advised Mr. Durbin on March 8th that Mr. Carl Grassl, Plant Breeder of the U.S.D.A. Canal Point Florida Station, was on his way to New Guinea in search of new types of cane.

We are sure that you will enjoy reading the following paragraphs from Dr. Tysdal's letter:

> "Mr. Grassl and Dr. Warner, of the Hawaiian Sugar Planters' Association, left last week for Australia, New Guinea, for exploration and collection of new types of sugarcane in this area, which is considered the native home of this plant. It is therefore a very fertile area for obtaining new types and germ plasm, including perhaps resistance to diseases. This collection will be added to our World Collection to supplement the material we now have. As you know, both Messrs. Grassl and Warner are experienced not only in sugarcane but also in this type of plant exploration.
>
> We expect this trip to return big dividends."

We know, of course, that New Guinea is not populated entirely by head-hunters and that the odds are very much in favor of Messrs Grassl and Warner returning with their head bones connected to their neck bones, etc., in the proper sequence.

The fact that they are going to this fabled land shows, however, that there is room for adventure even in the sugarcane breeding program.

### Blackstrap Period Finished

The official pricing period for Louisiana Blackstrap Molasses ended on February 28th and the Louisiana Sugar Exchange advised the Sugar Division on that day that the average price for the 21 week period, which began on October 4th, was 25.7443 cents a gallon, f.o.b. plantation.

Using this quotation, the Government has advised the sugar mill operators that the molasses bonus to the cane grower this year is 72.067 cents per net ton of sugarcane. This compares with a molasses bonus last year of 17.207 cents a ton when the season's average price of Blackstrap was 10.77975 cents a gallon.

The Pricing Period for sugar continues through the week ending April 25th for a total of 29 weeks.

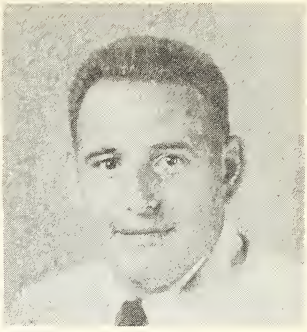
The sugar market has shown some signs of strengthening and, if it were not for the fact that the New York dock strike caused some Philippine cargoes to become distressed, we believe that our Old Mule would be doing better. In fact on two occasions recently, the New Orleans price was higher than the New York price.

In this connection, W. H. Edgar & Son said in their market letter of March 8th:

> "One or two parcels of Cubas have recently been sold to Southern refiners at the equivalent basis of 6.17 and considering the freight differential, is estimated to figure about 6.26 North Hatteras."

# IN THE FIELD WITH LLOYD LAUDEN

*by Lloyd L. Lauden*



## Can the Louisiana Sugar Industry Use a Variety of Cane that Lodges?

It has been reported by many that the acreage of N. Co. 310 will be increased for this year's planting.

The main reason given is that N. Co. 310 will produce very heavy tonnage with a satisfactory sucrose content. The supporting reasons are also of major importance. N. Co. 310 can be mechanically harvested satisfactorily in spite of its lodging characteristics. The pick-up attachment to the harvester works well in N. Co. 310 because the variety is not brittle and the tops do not break off, according to the reports. N. Co. 310 is adapted to both light and heavy soils and on heavy soil lodging has not been too bad. The variety also has cold tolerance. In one area where cold damage was very severe to all other varieties, N. Co. 310 was good enough to be used for seed in December.

In addition to lodging, N. Co. 310 does not mature early. Very little can be done about this. Placing the variety in heavy soils will help maturity to some extent but this will create an even greater problem when considering harvesting in heavy soils after rains set in.

It is important to note that N. Co. 310 has not lodged in the Teche region to any extent in spite of high yields in the variety there.

The cane breeding and selection program as conducted now has many rigid standards. Standards are determined by the Louisiana Sugar Industry in conference with the scientists of L.S.U. and the U.S.D.A. Some of the important qualities a new variety must have to meet the need of Louisiana, are good sugar content, satisfactory yield, stubbling ability, some resistance to borers and diseases, good keeping quality following cutting or after freezes, fairly early maturity, and erectness for mechanical harvesting.

To ask for all these qualities in one variety is almost asking the impossible. This becomes evident to those conducting the selection work after checking many thousand new varieties each year for many years.

Because it has been impossible to find the perfect cane, the industry has had to settle for only the mighty good ones. Occasionally, one or two standards have been lowered to allow a variety to be released, but only when the variety had special locality adaptation or had other good qualities that could off-set the undesirable characteristics. This was done with N. Co. 310. The yielding ability of N. Co. 310 and its general adaptability to both light and heavy soils outweighed its undesirable characteristics of being relatively late to mature and its susceptibility to mosaic.

It is also a fact that N. Co. 310 did not lodge badly during the testing period prior to its release.

Because the pick-up attachment to the harvester works well in N. Co. 310, many in the industry feel that the standard for erectness can now be lowered to take into the testing program varieties similar to N. Co. 310. In the same statement, it was also brought out that erect varieties

(Continued on page 174)

# IN WASHINGTON WITH JOE FERRIS

*by Josiah Ferris*

Washington representatives of agricultural interests are very much concerned over recent activities in the Senate and House which could lead to repeal of the agricultural exemptions under the Fair Labor Standards Act.

Bills have been introduced by Senators Pat McNamara, Wayne Morse, and Congressman Augustine B. Kelley and Emanuel Celler. The Subcommittee of the House Committee on Education and Labor began hearings March 5, 1957. The sub-committee of the Senate Committee on Labor and Public Welfare, headed by Senator John F. Kennedy of Massachusetts opened hearings on February 25, 1957 with Secretary of Labor James P. Mitchell as the first witness. Although Secretary Mitchell recommended that the agricultural exemptions be continued, several labor enthusiasts in the Senate and House will make an all out effort to have agricultural labor organized and thus vulnerable to unscrupulous labor racketeers. If they have their way farm labor will not only be subject to the minimum wage but the farmer will have to pay his hired man time and a half for overtime.

Senator Kennedy who aspires to be the Democratic presidential nominee four years from now has indicated in his questioning of witnesses that in his opinion corporation owned farms should be subject to all Wage and Hour provisions of the Fair Labor Standards Act.

Most members of Congress say it is unthinkable that control of food production in the United States be placed in the hands of labor organizers nevertheless they seem to feel it inevitable that, sooner or later, the agricultural exemptions in the Fair Labor Standards Act will be eliminated.

Several prominent members of Congress from agricultural areas said they had received no word from "the folks back home" on the subject which would seem to indicate that farmers who do not want to be forced to collect Union dues and pay hired help time and a half overtime do some quick letter writing.

Senator John Stennis of Mississippi on behalf of himself, Senator Spessard L. Holland of Florida and Senator Bourke B. Hickenlooper of Iowa, has introduced S. 1418 which would restore the intent of Congress in granting agricultural exemptions from the Wage and Hour provisions of the Fair Labor Standards Act. The Stennis bill would eliminate much of the Labor Departments' discretion in making administrative definitions of "agriculture", "first processing" and "area of production".

Many farmers and some legislators feel that the Labor Department by its unrealistic administrative rulings has virtually nullified the agricultural exemptions in the Fair Labor Standards Act.

The Stennis bill defines "agriculture" so as to include new methods of processing food developed since 1938, such as freezing, and states in detail those processes that would be exempt, so that all agricultural commodities would be treated equal-

# BORERS SURVIVING THE WINTER AND PROPECTS FOR THE 1957 INFESTATION IN LOUISIANA

*By E. J. Concienne, Louisiana Agricultural Experiment Station, and W. J. McCormick and L. J. Charpentier, Entomology Research Division, Agricultural Research Service, U. S. Department of Agriculture*

The annual cooperative survey by the Louisiana Agricultural Experiment Station at Baton Rouge and the USDA Sugarcane Insect Laboratory at Houma to determnie the number of sugarcane borers surviving the winter was conducted in February. The population surviving the winter was sufficiently heavy and widespread to be capable of causing destructive infestations if conditions during the growing season are favorable for development of the pest.

Cane trash in harvested fields was examined on ten plantations distributed over the sugar-producing area of the State. Ten representative fields on each plantation were examined. Four samples of 10 feet of row selected at random were examined in each field.

Data obtained in 1957 are summarized in the following table and compared with those for 1956:

| Plantation | Live borers per acre in 1957 | 1956 |
|---|---|---|
| Reserve | 726 | 998 |
| Erath | 617 | 254 |
| Oaklawn | 601 | 1,092 |
| Elm Hall | 454 | 364 |
| Orange Grove | 454 | 218 |
| Raceland | 454 | 926 |
| Catherine | 382 | 600 |
| Billeaud | 272 | 708 |
| Alma | 164 | 419 |
| Southdown | 73 | 672 |
| Average | 420 | 625 |

These data show that fewer borers overwintered in 1957 than in 1956 in spite of the mild winter. Nevertheless, the number surviving in cane trash is heavy enough to be classified as severe. This indicates that infestation by the first generation of the insect in 1957 can be serious. Growers should therefore watch the situation as it develops and be prepared to dust with ryania or cryolite where necessary.

---

ly. These processes would be exempt when performed by a farmer or on a farm as an incident to or in conjunction with farming operations, regardless of whether or not such practices are ordinarily performed by farmers on a farm.

The bill defines the "area of production" so as to include every country in which the commodity is commercially produced, the only limitation being the "area of production" shall not include a city with a population of 250,000 or more.

The "area of production" exemption is worded so as to include all the employees of any employer engaged within the "area of production" in the preparation for market or handling of any agricultural commodity.

"First processing" is spelled out definitely to include all operations required for the first processing of food whether or not such operations are performed at different times or in different places.

Farmers in the United States have a vital interest at stake and should not be hesitant in asking their Senators and Congressmen to support S 1418.

# COMPARISON OF INDICATED SUGAR YIELDS OF IMPORTANT VARIETIES ON DIFFERENT DATES DURING RECENT YEARS AT HOUMA, LOUISIANA

*By Leo P. Hebert, Research Agronomist, Field Crops Research Branch, Agricultural Research Service, United States Department of Agriculture.*

According to preliminary data just reported,[1] yields of sugar per ton of cane in Louisiana during 1956 were the highest of any year in the last decade. Several contributing factors have been offered as explanation for this increase in sugar recoveries, among them being the favorable growing season, cultural practices, varieties in cultivation, and the milling of fresh cane, but regardless of the underlying causes the fact remains that Louisiana sugar mills bagged more sugar per ton of cane processed in 1956 than they had in many years.

In an attempt to measure the effect of varieties alone on available sugar in cane, use is made of maturity-study data accumulated over a period of 4 years at the Houma station in connection with routine variety evaluation. In these studies several varieties, including important commercial varieties and promising unreleased ones, are planted in a randomized block experiment with 5 replications of each variety. Each block is divided into 18 subplots for purposes of sampling, and at the different sampling dates a sufficient number of stalks is taken from each of 3 subplots for a sample of 25 stalks. There are, therefore, five 25-stalk samples for each variety (one sample from each replication) on each sampling date. The samples are taken on October 1, and at semi-monthly intervals thereafter until December 15 each year. These studies are limited to the plant cane crop since the early cutting may affect stubbling and consequently the maturity of the following stubble crop.

Each year six varieties are tested in comparison with C. P. 44/101 which has been used during the past 4 years as the standard variety for determining earliness of maturity. During the period 1953 to 1956, inclusive, 11 varieties were tested but for the purposes of this study only 4 varieties, C. P. 44/101, C. P. 44/155, C. P. 48/103, and N. Co. 310 will be used because they were included in all 4 years.

Yields of sugar per ton of cane were calculated according to the Winter-Carp-Geerligs formula from crusher juice analyses for Brix and sucrose, using Arceneaux's simplification.[2] Consideration is given to differences in milling extraction between varieties but for purposes of this study the year to year comparisons for any one variety are valid because the correction factors assigned to a variety remained the same during the four years.

Table 1 gives the indicated yields of 96° sugar per ton of cane for 4 varieties in plant cane on each of 6 dates during the harvest season of 1953 to 1956, inclusive, and table 2 presents the same information in percent of the comparable yields for C. P. 44/101. An examination of table 1 shows that at the early part of the harvest seasons of 1953, 1954, and 1956, yields of sugar per ton of cane were considerably higher on each date than on the corresponding date in 1955. The interesting thing, however, is that in the case of C. P. 44/101 and C. P. 48/103, yields of sugar per ton were as high, or higher, at the end of the season in 1955 as on the corresponding dates in 1956. C. P. 44/155 was relatively later in maturing in 1956, being consistently below the average for the 4 years on all dates. Yields of sugar per ton of cane for this variety in 1956 were only slightly above the 1955 yields on the first

2 sample dates and actually below the previous year's yields after November 1. It is of interest to point out that for most of the harvest season this variety had lower sucrose than C. P. 44/101, which has not always been the case in previous studies. The November freezes no doubt affected the manufacture and accumulation of sugar by the cane plant but all varieties increased in yield of sugar per ton from November 15 to December 15. This table further reveals that, in most cases, available sugar in the juice on each date was slightly lower in 1956 than in either 1953 or 1954 for all varieties except N. Co. 310, and that in the average of all dates yields of sugar per ton were consistently lower for varieties C. P. 44/101, C. P. 44/155, and C. P. 48/103 in 1956 than in 1953 and 1954.

N. Co. 310 behaved differently in 1956, with sucrose yields being generally above average and above corresponding yields for the other 3 years, but there were several exceptions in which yields were lower during the past year than in 1953; for example, on October 1, October

(Continued on next page)

**TABLE 1**

**Average indicated yields of 96° sugar in pounds per ton of cane for four varieties tested at Houma during the period October 1 to December 15, from 1953 to 1956, inclusive.**

| Variety and year | Date of sampling | | | | | | Average |
|---|---|---|---|---|---|---|---|
| | October | | November | | December | | |
| | 1 | 15 | 1 | 15 | 1 | 15 | |
| C.P. 44/101 | | | | | | | |
| 1953 | 160.0 | 173.5 | 186.0 | 182.7 | 205.4 | 214.1 | 186.9 |
| 1954 | 139.2 | 155.9 | 185.2 | 194.4 | 219.3 | 227.5 | 186.9 |
| 1955 | 108.9 | 129.3 | 169.6 | 189.7 | 206.9 | 213.8 | 169.7 |
| 1956 | 140.0 | 163.4 | 172.9 | 198.9 | 200.4 | 209.5 | 180.8 |
| Ave. | 137.0 | 155.5 | 178.4 | 191.4 | 208.0 | 216.2 | 181.1 |
| C.P. 44/155 | | | | | | | |
| 1953 | 163.0 | 166.0 | 199.4 | 189.2 | 213.4 | 228.4 | 193.2 |
| 1954 | 136.4 | 143.9 | 180.0 | 194.7 | 220.4 | 232.8 | 184.7 |
| 1955 | 109.3 | 139.4 | 174.0 | 197.1 | 215.2 | 216.8 | 175.3 |
| 1956 | 126.6 | 144.7 | 165.5 | 190.2 | 216.2 | 214.2 | 176.2 |
| Ave. | 133.8 | 148.5 | 179.7 | 192.8 | 216.3 | 223.0 | 182.4 |
| C.P. 48/103 | | | | | | | |
| 1953 | 197.9 | 216.6 | 234.3 | 231.2 | 252.7 | 255.9 | 231.4 |
| 1954 | 187.1 | 213.9 | 228.0 | 240.9 | 263.3 | 269.5 | 233.7 |
| 1955 | 164.9 | 195.2 | 212.7 | 238.4 | 260.2 | 262.9 | 222.4 |
| 1956 | 184.0 | 203.1 | 225.9 | 235.1 | 239.5 | 243.8 | 221.9 |
| Ave. | 183.5 | 207.2 | 225.2 | 236.4 | 253.9 | 258.0 | 227.4 |
| N.Co. 310 | | | | | | | |
| 1953 | 151.3 | 165.4 | 193.0 | 201.6 | 218.9 | 217.4 | 191.3 |
| 1954 | 132.0 | 149.4 | 163.3 | 185.3 | 212.6 | 225.0 | 177.9 |
| 1955 | 97.6 | 120.4 | 154.3 | 175.0 | 209.6 | 204.2 | 160.2 |
| 1956 | 137.1 | 159.5 | 191.0 | 214.8 | 220.8 | 231.3 | 192.4 |
| Ave. | 129.5 | 148.7 | 175.4 | 194.2 | 215.5 | 219.5 | 180.5 |

15, and November 1. On all other dates sugar yields for this variety were higher in 1956 than in the other 3 years.

Table 2 presents the results of maturity studies with respect to available sugar in cane at different dates for 3 varieties in relation to comparable yields for C. P. 44/101. The relative yields of sugar of the varieties vary somewhat between years but it is believed that the average of 4 years should give a reliable estimate of relative maturity for the varieties studied. In agreement with results of previous tests yields of sugar per ton of cane for C. P. 48/103 were relatively high and those of N. Co. 310 relatively low at the beginning of the harvest season. In the 4-year average, C. P. 48/103 gave 134 percent of the sugar yields of C. P. 44/101 on October 1, and approximately 119 percent on December 15, while corresponding yields for N. Co. 310 were 95 and 102 percent, respectively. Values for C. P. 48/103 ranged from 124 to 151 percent of C. P. 44/101 and those for N. Co. 310 from 90 to 98 percent on October 1. C. P. 44/155 averaged 98 percent of C. P. 44/101 on October 1 for all four

**TABLE 2**

**Relative indicated yield of 96° sugar per ton of cane for different varieties at Houma during the period October 1 to December 15, from 1953 to 1956, inclusive.**

**(C. P. 44/101 = 100 in all cases)**

| Variety and year | Date of sampling | | | | | |
|---|---|---|---|---|---|---|
| | October | | November | | December | |
| | 1 | 15 | 1 | 15 | 1 | 15 |
| C.P. 44/155 | | | | | | |
| 1953 | 102 | 96 | 107 | 104 | 104 | 107 |
| 1954 | 98 | 92 | 97 | 100 | 101 | 103 |
| 1955 | 100 | 108 | 103 | 104 | 104 | 101 |
| 1956 | 90 | 89 | 96 | 96 | 108 | 102 |
| Ave.* | 98 | 95 | 101 | 101 | 104 | 103 |
| C.P. 48/103 | | | | | | |
| 1953 | 124 | 125 | 126 | 127 | 123 | 120 |
| 1954 | 134 | 137 | 123 | 124 | 120 | 118 |
| 1955 | 151 | 151 | 125 | 126 | 126 | 123 |
| 1956 | 131 | 124 | 131 | 118 | 120 | 116 |
| Ave.* | 134 | 133 | 126 | 123 | 122 | 119 |
| N.Co. 310 | | | | | | |
| 1953 | 95 | 95 | 104 | 110 | 107 | 102 |
| 1954 | 95 | 96 | 88 | 95 | 97 | 99 |
| 1955 | 90 | 93 | 91 | 92 | 101 | 96 |
| 1956 | 98 | 98 | 111 | 108 | 110 | 110 |
| Ave.* | 95 | 96 | 98 | 101 | 104 | 102 |

* Weighted values.

years, ranging from 92 to 102 percent.

## Discussion of Results

Indicated yields of sugar per ton of cane for the 4 varieties in this study were higher at Houma in 1953 and 1954 than in 1956. During the same period actual recoveries by the Louisiana sugar factories were considerably lower in 1953 and 1954 than in 1956, according to factory reports. The reasons for the apparent discrepancy between theoretical yields and actual commercial yields can be explained, it is believed, by: (1) A change in varieties milled commercially. Results of tests show that commercial varieties in Louisiana differ by as much as 8 percent in theoretical yield of sugar per ton with the same sucrose and purity analyses of crusher juice because of differences in juice extraction and in purity drop with complete milling; (2) A change in the manner of handling the cane after cutting. With the emphasis on fresh cane because of losses in sucrose after cutting, factories are getting better quality cane; or (3) A combination of the two factors.

During this period the percentage of the cane acreage in the State devoted to C. P. 44/101 has increased from 20 to approximately 51 percent and that devoted to C. P. 36/105 has decreased from 37 to 19 percent.[3] Because of better milling qualities, resulting in more complete extraction, C. P. 44/101 can be expected to yield approximately 4 percent more sugar per ton of cane than C. P. 36/105 when the two varieties have the same crusher juice analysis. The replacing of C. P. 36/105 with C. P. 44/101, which gives better extraction, and slightly better sucrose and purity values, no doubt accounted for much of the increase in sugar yields in the State. It is of interest to speculate as to what the State yields would have been in 1953 and 1954 if C. P. 44/101 had occupied one-half of the State acreage at that time.

It is recognized that the milling of fresh cane results in higher sugar yields, and mills in general made concerted efforts to reduce the time interval from cutting to processing. There is no doubt that during the past two years the quality of the cane milled was much improved over the previous two years. Many companies now employ supervisors to control the deliveries of cane at the mills so that it is received as soon after cutting as possible, thus reducing the accumulation of old cane.

It is believed that these two factors, i.e., replacement of C. P. 36/105 with C. P. 44/101, and the processing of fresher cane, were largely responsible for the fact that commercial sugar recoveries were higher than in the past several years, although results of maturity studies at Houma show that in the case of three of the varieties studied indicated yields of sugar per ton of cane were actually lower in 1956 than in either 1953 or 1954.

---

[1] Durbin, G. J. Press release January 1957.

[2] Arceneaux, G. A simplified method of making theoretical sugar yield calculations in accordance with the Winter-Carp-Geerligs formula. Int. Sug. Jour. 37:364-365. 1935.

[3] Hebert, L. P. The Louisiana sugarcane variety census for 1956. The Sugar Bull. 34 (22): 334-337. 1956.

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# 1957 FERTILIZER RECOMMENDATIONS FOR SUGARCANE

*(Prepared jointly by M. B. Sturgis and David Byrnside of L.S.U. and Lester Davidson of the U. S. D. A.)*

To plant cane on light and medium textured soils apply 40 to 60 pounds of nitrogen per acre by use of any of the common carriers. On heavy textured soils apply 60 to 80 pounds of nitrogen. Where the green weight of legumes turned under ahead of plant cane is as much as 8 to 10 tons per acre, it is not necessary to fertilize cane. In most cases the yields of legumes are not this high. Where poor legume growth has been obtained before plant cane, response to $P_2O_5$ and $K_2O$ additions could be expected.

On stubble cane on the medium textured to heavy alluvial soils of the Mississippi or Red River bottoms, use 80 to 100 pounds of nitrogen per acre. Where known deficiencies of phosphorus and potassium exist, which is usually in the very fine sandy loam and silt loam types, 25 to 40 pounds of $P_2O_5$ and 40 to 60 pounds of $K_2O$ should be applied in addition to nitrogen. In some cases the plant food may be supplied by the application of 300 to 500 pounds of 6-8-12, 10-5-10, or 0-10-20 per acre supplemented with 50 to 100 pounds of nitrogen from either solid or liquid materials.

To stubble cane on the medium to light textured soils of the Pleistocene Mississippi terraces, which areas are largely west of the Teche and include the Richland, Olivier, and Iberia series, apply 80 to 100 pounds of N, 25 to 40 pounds of $P_2O_5$, and 40 to 60 pounds of $K_2O$.

Nitrogen may be supplied from any commonly available solid or liquid materials. Where anhydrous ammonia is being used to supply nitrogen, minerals may be applied either before the ammonia or in the same operation from hoppers mounted on the sides of the tractor. The practice of splitting applications of nitrogen to stubble cane on medium textured soils where as much as 80 or more pounds of nitrogen is applied is proving profitable in some cases. Half of the nitrogen can be applied four inches deep in the middles at the last cultivation. Ammonia and other highly soluble carriers of nitrogen are especially adaptable to split applications.

Over a period of years the highest efficiency in extra production of sugar cane from fertilizer nitrogen has been one ton of cane for each increment of 6 pounds of nitrogen. Where phosphate and potash were needed for sugar cane, the addition of 40 pounds of $P_2O_5$ and 60 pounds of $K_2O$ per acre increased the yield of cane 5 tons per acre above the use of 60 to 100 pounds of nitrogen alone.

## WEEKLY AVERAGE PRICES

The weekly average prices issued by the Louisiana Sugar Exchange since the start of the 1956-57 pricing period have been as follows:

Week ending October 11, 1956
Raws 6.15, Blackstrap 21.20

Week ending October 18, 1956
Raws 6.17, Blackstrap 22.00

Week ending October 25, 1956
Raws 6.24, Blackstrap 23.30

Week ending November 1, 1956
Raws 6.40, Blackstrap 23.96

Week ending November 8, 1956
Raws 6.225, Blackstrap 24.00

Week ending November 15, 1956
Raws 6.18, Blackstrap 24.75

Week ending November 22, 1956
Raws 6.17, Blackstrap 25.42

Week ending November 29, 1956
Raws 6.29, Blackstrap 27.00

Week ending December 6, 1956
Raws 6.38, Blackstrap 27.00

Week ending December 13, 1956
Raws 6.31, Blackstrap 27.00

Week ending December 20, 1956
Raws 6.26, Blackstrap 27.00

Week ending December 27, 1956

Raws 6.28, Blackstrap 27.00

Week ending January 3, 1957
Raws 6.31, Blackstrap 27.00

Week ending January 10, 1957
Raws 6.34, Blackstrap 27.00

Week ending January 17, 1957
Raws 6.37, Blackstrap 27.00

Week ending January 24, 1957
Raws 6.22, Blackstrap 27.00

Week ending January 31, 1957
Raws 6.12, Blackstrap 27.00

Week ending February 7, 1957
Raws 6.01, Blackstrap 27.00

Week ending February 14, 1957
Raws 6.015, Blackstrap 27.00

Week ending February 21, 1957
Raws 6.02, Blackstrap 26.00

Week ending February 28, 1957
Raws 6.04, Blackstrap 26.00

SEASON'S AVERAGE FOR BLACKSTRAP 25.7443

Week ending March 7, 1957
Raws 6.08

Season's Average Through March 7, 1957
Raws 6.208


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## IN THE FIELD

(Continued from page 165)

with the same yielding ability as N. Co. 310 and with earlier sugar would be better. Many in the industry also feel that when a variety yields 35 tons it will also go down. These thoughts have been conveyed to the researchers conducting the breeding and selection program.

It is worthy to note that the scientists doing the breeding and selection work, along with their colleagues in other fields of sugar cane research, have been the very life blood of this industry. They have met and conquered many of the industry's problems. The sugar cane breeders have been able to give the industry a new variety when an old variety deteriorated.

To lower any standard, and in this case that of erectness could possibly lead to the development of a variety that has a yield potential far above that of N. Co. 310 and with a better sugar content. Can the industry use such a variety in spite of its lodging characteristic for a portion of the acreage?


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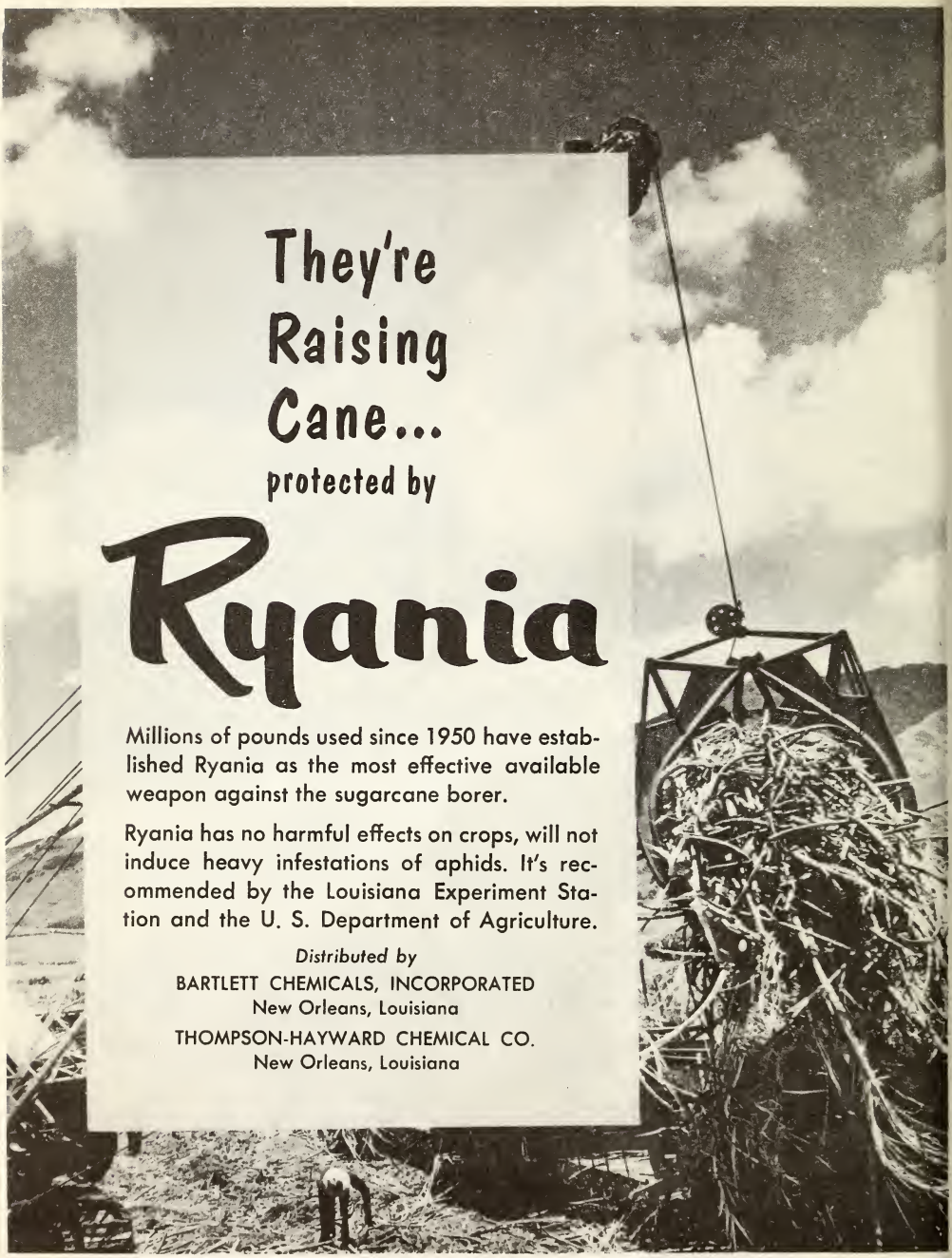
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# THE SUGAR BULLETIN

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in the interests of the Domestic Sugar Cane Industry

THE
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Gilbert J. Durbin, Editor — Andrew W. Dykers, Managing Editor

Lloyd L. Lauden, Agronomist and Field Representative

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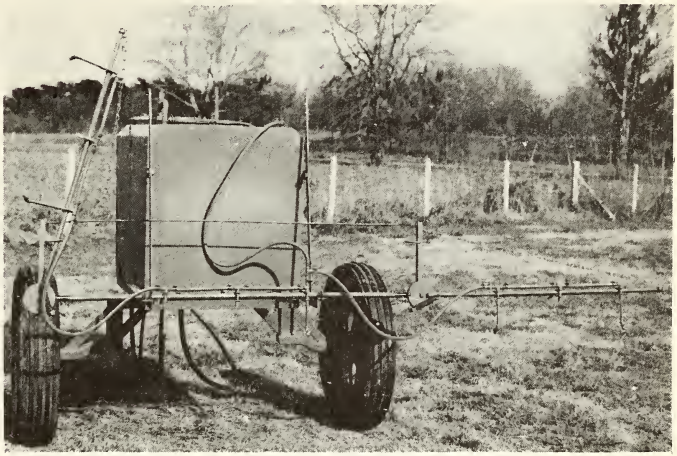

(Rear view showing arrangement and folding of spray boom)

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# UP FRONT WITH THE LEAGUE

*by A. W. Dykers*

**Federal Transportation Tax**

It has come to our attention that some confusion has arisen with respect to the applicability of the 3% Federal Transportation Tax to transportation allowances made to a sugar cane grower by a processing mill in connection with the delivery of the grower's own sugar cane.

This question arose in 1946, and an informal ruling was issued by the Miscellaneous Tax Division of the Internal Revenue Service at New Orleans, Louisiana, from which ruling we quote as follows:

> "Where the delivery activities of a farmer are carried on with his own equipment, and are merely incidentals of its business to sugar cane growing, and the selling of sugar cane, he is not regarded as a 'person engaged in the business of transportation of property for hire' within the meaning of the Code and the tax does not apply even though a separate charge for the delivery is made by the farmer to the mill.
>
> "In regard to the rental of cane trailers, if they are rented without the services of a driver, the transportation tax would not apply."

When a grower delivers sugar cane to a mill and the title of the cane passes at the mill, which is true in all instances, in accordance with our understanding, the tax is not due, even though a transportation allowance is made to the grower by the mill. If any processor or grower has erroneously paid this tax, he should make arrangements to claim refund.

**Exchange Holds Annual Meeting**

The Annual Meeting of the Louisiana Sugar Exchange was held in New Orleans on March 27th and the following gentlemen were re-elected to serve on the Board of Directors for the next two years: P. L. Billeaud, Broussard, La.; W. S. Chadwick, New Orleans; C. S. Churchill, Donaldsonville; Murphy J. Foster, Franklin; E. D. Gelzer, New Orleans; Charles F. Gibbins, New Orleans; Leon Godchaux II, New Orleans; F. A. Graugnard, Jr. St. James; Irving Legendre, Thibodaux; John B. Levert, New Orleans; Chas. A. Levy, New Orleans; J. J. Munson, Houma, and E. A. Rainold, Jr., New Orleans.

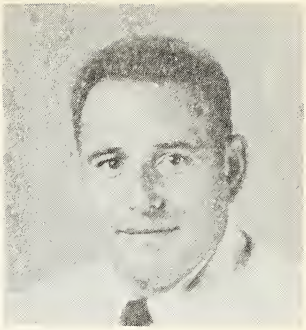
Members of the Board whose terms have another year to run are T. M. Barker, Lockport; E. A. Burguieres, New Orleans; F. Evans Farwell, New Orleans; Robert Fraser, New Orleans; E. J. Garland; New Orleans; Harry S. Hardin, New Orleans; Louis P. LeBourgeois, New Orleans; Samuel H. Livaudais, Jr., New Orleans; Edgar Murray, New Orleans; Harold F. Saufley, New York; Charles C. Savoie, Belle Rose; G. M. Talmage, New Orleans, and Bronier Thibaut, of Napoleonville.

John B. Levert, who has ably guided the Exchange during the past two years, addressed the meeting and expressed his deep appreciation to every member of the Exchange for the help and understanding that he enjoyed during his two

(Continued on page 190)

# IN THE FIELD WITH LLOYD LAUDEN

*by Lloyd L. Lauden*



## Reports from L. S. U.

Well, if you didn't attend the Contact Committee Meeting in Baton Rouge on March 12, you r e a l l y missed something.

Researchers at L. S. U. gave reports on the work of the past year and discussed plans for the coming year.

Dr. Joe Campbell, first on the program, did his usual good job on cost studies. Dr. Campbell asked the Committee to offer comments and suggestions on the work being conducted.

Dr. Sturgis delivered a paper prepared jointly by Mr. David Byrnside and himself. Highlighted in his talk was the possible need for potash and phosphorous on more of the lighter soils of the sugar belt. Dr. Sturgis said that there is a possibility that some soils will now respond to applications of phosphate and potash that heretofore have not because of the larger yields of cane per acre now being made plus the fact that larger amounts of nitrogen is being used per acre.

Mr. Preston Dunckelman and Dr. Richard Breaux each presented information on the cane breeding program at L. S. U. They discussed experiments being conducted to help the researchers find a better variety. The experiments will indicate whether methods currently used in the selection of a new variety can be improved. Dr. Breaux also told of another experiment conducted some years ago which involved a lost Shelton pony—but that's too long a story. Ask Dr. Breaux about the experiment sometimes.

Mr. E. R. Stamper, the weed control expert of L. S. U., discussed the entire weed control program as recommended to the sugar belt. Mr. Stamper pointed out that Dalapon did a good job of killing Johnson grass but cautioned users that great care must be taken in applying only the amounts recommended. Excess amounts applied may cause severe stunting of cane. The data presented indicated that increase yields were obtained with some chemicals in spite of poor control of grass. This is a strong indication that some of the chemicals act as growth stimulants. This phase of research merits further investigation.

Both Dr. R. J. Steib and Dr. I. L. Forbes gave interesting talks on the control of Stunting Disease. Of particular interest was the fact that the heat treating units and the temperature now being used is doing a good job of controlling the disease. Of great interest was Dr. Forbes' discussion of the research planned to isolate the causative virus and to determine whether different strains exist. Frequent surveys made throughout the belt by Dr. Steib and others show that the disease is widespread. It is hoped that more farmers will make plans to get treated seed this year. Research has proved that increases in yield of 4 to 7 tons of cane per acre can be made by the use of clean seed.

Mr. I. L. Saveson, Jr. and Mr. Zane Lund told of the research con-

(Continued on page 189)

# IN WASHINGTON WITH JOE FERRIS

*by Josiah Ferris*

## Sugar Task Group Report

The contents of the report of the Task Group on Sugar to the President's Appointed Bi-Partisan Commission on Increased Industrial Use of Agricultural Products was unveiled March 28, 1957 by Ernest W. Greene, Sugar Task Force President. Mr. Greene spoke during the morning session of the 22nd Annual Chemurgic Conference of the Council for Agricultural and Chemurgic Research, at the Congress Hotel in Chicago.

Mr. Greene's Sugar Task Group was set up last September to prepare and present to the President's Commission the necessary recommendations which in its opinion will bring about the greatest practical use for industrial purposes, other than for food and animal feed, of sugar produced from sugar cane and sugar beets. The President instructed his Commission to prepare and present to the Congress before June 15, 1957 recommendations for legislation which would increase industrial use of agricultural products.

His Task Group Report, Mr. Green said, shows that the domestic sugar industry needs no special legislation to achieve the aims of The President's Commission. Basic legislation now in effect—the Sugar Act of 1948, as amended—is sufficiently adaptable to meet any increased demands for sugar in the non-food field, and modification of the law is not required.

"Nevertheless" said Mr. Greene, "it is recognized that certain types of general legislation intended to offer broad encouragement to the use of farm crops in non-food products, could accelerate the developments which the Commission has fixed as a goal. These might include tax and other incentives applicable to new facilities erected for developmental, pilot plant or market adaptation purposes looking toward increased industrial use of all agricultural products. There might also be a review of governmental patent policies."

The Greene report recommended new and additional personnel, buildings and equipment to be dedicated specifically to research on agricultural products, including sugar.

## Shields Speaks to N. Y. Sugar Club

A cogent analysis of what the 1956 amendments to the Sugar Act already have meant to the American beet sugar industry was presented by Robert H. Shields, President and General Counsel of the United States Beet Sugar Association, in a speech delivered at the Sugar Club of New York, March 27, 1957.

The beet sugar industry, Shields declared, now stands on a high, near-record plateau of production and marketing, and looks to the future with renewed hope and confidence based upon once more participating, to some extent, in supplying the nation's expanding sugar market.

The industry spokesman reported a near-record beet sugar crop of about two million tons in 1956, with an all-time record yield of 2.4 tons of sugar per acre planted. He forecast a 1957 production which may

(Continued on page 188)

# PRESIDENT LEVERT ADDRESSES ANNUAL MEETING OF THE LOUISIANA SUGAR EXCHANGE

*Fellow members of the Louisiana Sugar Exchange and our distinguished guests—*

It is a little hard for me to realize that I stand before you today to report on the second year that I have had the honor and privilege of serving as President of the Louisiana Sugar Exchange.

The year since our last Annual Meeting has passed very quickly and, I am happy to say, without any difficulties that we have not been able to overcome through the very fine cooperation of the members of the Exchange.

At the close of 1956 I was asked by one of the local newspapers to review the sugar year for its readers and I began my report by stating that nineteen hundred and fifty-six had been a "good" year for the Louisiana sugar industry. I still feel that 1956 should be listed among the better years for our industry despite the fact that action by the Sugar Branch has definitely dimmed the bright prospects of receiving an adequate price for our sugar that seemed to exist at the turn of the year.

New sugar legislation allowing the Louisiana sugar industry to participate in the increasing consumption of sugar in the United States was passed by the Congress and signed by the President in 1956, and because of this Louisiana and Florida were allowed to market over 100,000 tons more sugar in 1956 than our marketing allowable for the previous year. Marketing allotments for 1957 have already been estimated by the Government to be at least the same as our final 1956 marketings and there are, of course, prospects that we will be allowed to sell even more sugar this year. A fifteen percent increase in cane acreage for 1957 was granted each and every cane farmer in Louisiana in 1956 because of the increased marketings of sugar and this is certainly a pleasing development.

Another outstanding feature of the year has been the price of blackstrap molasses. The pricing period for this commodity ended on February 28th and the Blackstrap Molasses Quotation Committee of the Exchange announced on that day that the average price for the 21 week season, which began on October 5th, was 25.7443 cents a gallon, f.o.b. plantation. This is nearly 15 cents a gallon higher than the average price of blackstrap for last season, and the Government has announced that the molasses bonus to Louisiana cane farmers this year is 72.067 cents per ton of cane.

Right here I would like to express my appreciation of the work done by the Blackstrap Molasses Quotation Committee of the Exchange despite their trials and their tribulations.

This Committee was again under the able chairmanship of Leon Godchaux II and the other members were Bascom Doyle, F. Evans Farwell, C. F. Gibbins, L. P. LeBourgeois, John Manard, S. J. Menard, and H. C. Vaccaro. I am sure that it is a source of satisfaction to these gentlemen to know that their quotations were accepted without question by the Sugar Branch of the U.S.D.A. and declared official for cane settlement purposes almost immediately after the final quotation was announced on February 28th.

The pricing period for Louisiana raw sugar will not be completed until April 25th, which means that again this year our Raw Sugar Quotation Committee is still hard at work, and will continue to be until April 25th.

The Raw Sugar Quotation Committee is headed by our former

(Continued on next page)

# SUGARCANE BORER INFESTATION AND LOSS IN LOUISIANA

*By Ralph Mathes, W. J. McCormick, L. J. Charpentier, and W. E. Haley, USDA, Agricultural Research Service, Entomology Research Branch, E. J. Concienne, Louisiana Agricultural Experiment Station*

Although the sugarcane borer infestation in Louisiana's 1956 sugarcane crop was below normal, it caused a loss estimated at practicallly $4¾ million. The infestation averaged 14 percent of the joints bored, and the crop loss was estimated to be three-fourths of the percentage of joints bored, or 10.5 percent. The sugarcane crop in the State was valued at about $46 million.[1]

Surveys to determine the damage caused by the sugarcane borer have been conducted in Louisiana annually since 1935. The information obtained has been used to evaluate the various factors responsible for general fluctuations in borer populations and the limits of practical expenditure for control. Examinations were made at time of harvest on ten plantations, each representative of an area producing about one-tenth of the sugar in the State. Six fields were surveyed in representative locations on a plantation, divided among varieties and soil types in proportion to their acreage importance in the area. Ten consecutive stalks were examined in ten locations of each field. Each field infestation average was given equal weight in determining the plantation average, and each plantation average in determining the infestation average for the State. The averages for each year are presented in table 1.

[1] Season Average Prices and Value of Production, 1955 and 1956, by States, issued by the Crop Reporting Board, Agricultural Marketing Service, U.S.D.A., December 17, 1956. This figure is a preliminary one for sugarcane for sugar, seed, and sirup combined, and does not include Government payments under the Sugar Act.

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President, Chas A. Levy, with F. Evans Farwell, Will J. Gibbens, James Graugnard, Sedgwick Howard, J. C. LeBourgeois, E. A. Rainold, and G. M. Talmage serving as members.

It is impossible to emphasize too forcefully that the quotation committees are the heart of the Sugar Exchange. Last year I stated that the men who serve on these committees perform their rather thankless tasks as a public service to our industry. I want to repeat my statement that without them the entire Louisiana system of cane payments and sugar settlements could not function. Again let me say that they are very important to all of us, and we are grateful to them for their unselfish service.

In this connection I am happy to report that this year the American Sugar Cane League recognized the invaluable service that the Exchange performs for the cane farmers of our State by agreeing to underwrite any deficit in our operating expenses up to $2,500.00

At our request, James Graugnard of St. James, La. was selected by the League to represent the grower segment of our industry on the Raw Sugar Quotation Committee of the Exchange. Mr. Graugnard has faithfully attended the weekly meetings of the Committee despite the fact that he must drive many miles to and from New Orleans to do so.

I feel that I should not close this report without calling attention to the abnormally large freight differential that now exists between New York and New Orleans shipments of Cuban raw sugar. The present difference in freight charges is 9¢ a hundred pounds whereas at this time last year the difference was

(Continued on page 188)

Table 1. Sugarcane borer infestation on ten representative plantations in Louisiana, 1935-56. Figures in percent of joints bored.

| Year | Alma | Billeaud | Catherine | Elm Hall | Erath | Oaklawn | Orange Grove | Raceland | Reserve | Southdown | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1935 | 3 | 3 | 4 | 13 | 6 | 10 | 10 | 9 | 12 | 10 | 8 |
| 1936 | 2 | 9 | 4 | 9 | 8 | 8 | 5 | 10 | 25 | 7 | 9 |
| 1937 | 6 | 9 | 15 | 20 | 8 | 26 | 15 | 16 | 34 | 13 | 16 |
| 1938 | 5 | 9 | 15 | 17 | 9 | 37 | 15 | 15 | 22 | 15 | 16 |
| 1939 | 10 | 9 | 23 | 27 | 8 | 32 | 19 | 21 | 25 | 23 | 20 |
| 1940 | 2 | 1 | 1 | 2 | 4 | 18 | 9 | 5 | 6 | 5 | 5 |
| 1941 | 6 | 7 | 17 | 24 | 7 | 30 | 23 | 19 | 55 | 14 | 20 |
| 1942 | 11 | 5 | 38 | 28 | 8 | 34 | 25 | 29 | 41 | 16 | 24 |
| 1943 | 7 | 6 | 23 | 25 | 14 | 23 | 25 | 32 | 24 | 14 | 19 |
| 1944 | 2 | 4 | 11 | 19 | 6 | 17 | 27 | 20 | 23 | 10 | 14 |
| 1945 | 6 | 9 | 32 | 19 | 13 | 14 | 11 | 26 | 23 | 14 | 17 |
| 1946 | 2 | 9 | 6 | 10 | 8 | 16 | 7 | 21 | 8 | 16 | 10 |
| 1947 | 5 | 13 | 12 | 13 | 11 | 17 | 10 | 19 | 21 | 12 | 13 |
| 1948 | 2 | 5 | 8 | 8 | 14 | 18 | 6 | 21 | 3 | 6 | 9 |
| 1949 | 4 | 20 | 26 | 29 | 17 | 26 | 30 | 32 | 21 | 21 | 23 |
| 1950 | 4 | 13 | 9 | 14 | 9 | 4 | 11 | 32 | 11 | 21 | 13 |
| 1951 | 1 | 2 | 10 | 6 | 5 | 13 | 13 | 8 | 5 | 5 | 7 |
| 1952 | 15 | 14 | 28 | 21 | 12 | 37 | 43 | 30 | 43 | 32 | 28 |
| 1953 | 25 | 34 | 26 | 12 | 27 | 20 | 21 | 33 | - | 49 | 28 |
| 1954 | 16 | 20 | 16 | 9 | 31 | 22 | 18 | 31 | 22 | 23 | 20 |
| 1955 | 17 | 20 | 20 | 23 | 22 | 25 | 10 | 33 | 47 | 27 | 24 |
| 1956 | 9 | 18 | 7 | 3 | 17 | 12 | 10 | 21 | 26 | 18 | 14 |
| Average of 22-year period | | | | | | | | | | | 16 |

# RECOMMENDATIONS FOR THE CHEMICAL CONTROL OF THE SUGARCANE BORER IN LOUISIANA IN 1957

*By E. J. Concienne, Entomologist, and L. D. Newsom, Head Entomology Research, Louisiana Agricultural Experiment Station*

The following recommendations for control of the sugarcane borer by dusting with cryolite or ryania are based on many years research by both the Louisiana Agricultural Experiment Station and the Federal Station at Houma. Chemical control is recommended only where the proper checking of fields have revealed a borer infestation sufficiently heavy to justify the expenditure. Other control practices, especially those which aid in destroying overwintering populations of borers, should not be neglected with the idea of depending entirely upon insecticides. Such cultural practices properly applied may eliminate the need of dusting in some instances or at least reduce the acreage requiring it. By lowering the population to a more normal one may also insure more effective control where chemicals are used.

I. *General Recommendations:*

1. In years when a normal borer infestation exists, on a large farm or where community cooperation prevails, an overall control program is preferable and involves starting with first generation dusting of all acreage found to be sufficiently infested. Additional infestations developing later should be controlled by second and sometimes third generation dusting. However, *under the prevailing conditions of a heavy, widespread infestation, first generation control is not advisable.* The program should then start with the second generation.

2. For treating relatively small parts of large infested areas or a small farm surrounded by infested cane, first generation control is not recommended, because of the possibilities of reinfestation by later generations from the nearby untreated cane and/or corn.

3. Although these recommendations apply to sugarcane, corn should also be dusted for borer control where the infestation and growth justifies it.

Only ryania can be used on corn since cryolite may result in serious plant injury.

II. *First generation control:*

1. Minimum borer infestations requiring dusting.

a. Egg counts. Five egg masses per man-hour.

b. Leaf signs. A minimum of 10 stools per 200 row feet or 360 per acre showing leaf signs. First, use egg counts which should reveal the heavier infested areas, then resort to leaf sign counts. Egg counts may be entirely impractical in many instances.

2. Insecticides, dosage and applications.

a. Use either undiluted cryolite (synethetic or natural) or 40 per cent ryania at the rate of 10 to 12 pounds per acre per application. The 70 per cent cryolite would have to be used at the rate of 13 to 15 pounds. (Build-up of the yellow sugarcane aphid is not a problem with first generation dusting).

b. Make 4 weekly applications, unless proper checking indicates more or fewer are needed.

III. *Second generation control:*

1. Minimum borer infestations requiring dusting.

a. Deadhearts—A minimum of 14 per 200 row feet or 500 per acre.

b. Leaf signs — 10 stools per 200 row feet or 350 stools per acre showing leaf signs (can be used in small cane only).

c. Leaf sheath feeding — 10 stools per 200 row feet or 360 stools per acre showing leaf sheath feeding. Begin the selec-

tion of fields on the basis of deadhearts, and then follow, especially in adjoining fields, with egg mass, leaf sign, and leaf sheath feeding counts.

2. Insecticides, dosage and applications.

a. Use either 40 per cent ryania or undiluted cryolite at the rate of 12 to 15 pounds per acre per application or 70 per cent cryolite at 15 to 19 pounds per acre per application (Experimental data show that ryania does better than cryolite against 2nd and 3rd generations and will not build-up the yellow sugarcane aphid).

b. Make 4 weekly applications, unless field conditions indicate more or fewer are needed.

IV. *Third generation control:*

1. Minimum borer infestations requiring dusting.

a. Leaf sign — numerous leaf signs generally, especially in stunted cane of subnormal growth.

b. Leaf sheath feeding — 10 stools per 200 row feet or 360 per acre showing leaf sheath feeding.

2. Insecticide, dosage, and applications.

a. Use 40 per cent Ryania at the rate of 12 to 15 pounds per acre per application. Cryolite is not recommended.

b. Make 4 weekly applications. Plant cane short in growth is most likely to be heavily damaged by third generation borers.

V. *The following are important for successful control of either generation:*

1. Make proper field examinations to determine where and when to dust. This necessitates continuous weekly checking.

2. Start dusting with a general hatching of small borers, but before the larvae begin boring into the plant.

3. As a general rule, four applications at weekly intervals are necessary; however, proper checking may reveal the need of only three or a fifth in some individual fields.

4. Apply the dusts at the recommended dosages while the air is quiet and the plants are moist or wet with dew, which is usually between 6 p.m. and 9 a.m. Evening dusting after the wind subsides is satisfactory. It is important that the application rates be raised to the higher limits specified for each generation where the borer infestation is heavy or cane growth is unusually dense.

5. Use an airplane for treating large areas. The width of swath should not exceed 36 feet, and the plane should be flown at the proper height, which will vary with atmospheric conditions, to insure proper distribution of the dust.

6. A power ground-dusting machine or rotary hand gun may be used for treating smaller areas. About 7 acres of cane can be treated per hour with a 3-row ground machine and about 1 acre per hour with a hand gun. Dusting more than 300 acres on any one plantation by ground machine is impractical.

7. On ground machines, two nozzles to the row give some insurance against incomplete coverage through clogging or misplacement of nozzles.

VI. *Sprays:*

Although sprays have shown some promise, they are not recommended because of the increased cost of application.

VII. *Other insecticides:*

Insecticides other than cryolite or Ryania are not recommended because they have not given comparable control, and may even account for an increase in borer infestation because of their toxic effect upon natural enemies of the borer. The 100 per cent ryania at low dosage rates is not recommended, since there is not sufficient data to support such a recommendation.

## ADDRESS

(Continued from page 184)

only four cents.

The records of the Exchange show that the freight differential has generally been fairly accurate in reflecting the value of raw sugar delivered New Orleans. Lately, however, the spot quotations in New York has been set by sales of distressed cargoes of Philippine sugars and this has resulted in local quotations that appear to be out of line with the true value of raw sugar delivered New Orleans.

Perhaps the present maladjustment of our pricing system will correct itself, but I feel that this matter is of sufficient importance to be called to your attention.

As I complete my tenure of office, may I express my heartfelt thanks to every member of the Exchange for the help and understanding that has been so generously offered, and the particular thanks due to Andrew Dykers and Mrs. Evely Cotogno for the wonderful way that they have handled the affairs of the Exchange.

The work of the Exchange, to my mind, is most vital to the efficient and successful operation of the Louisiana Sugar Industry, and, although my term of office has now expired, I will always be available to serve the Exchange in any capacity possible.

I thank you.

———o———

## IN WASHINGTON

(Continued from page 182)

be expected to be higher than 1956, principally because permitted acreage for sugar beets has been increased some 12 percent this year—from 850,000 acres in 1956 to 950,000 in 1957.

Indications are, Shields declared, that there will be "a cushion" of beet sugar supplies this year to protect the American consumer against the possibility short supplies from other quota sources, either foreign or domestic. An "added comfort to the consumer", he said, was the fact that such extra supplies of beet sugar are now, because of the 1956 Sugar Act amendments, immediately available when needed.

Shields said his industry's 1957 marketing quota remains unchanged as compared with the 1956 quota—1,953,952 tons. Last year, a small Virgin Islands deficit added 1,449 tons to the beet quota, increasing it to an aggregate of 1,955,401 tons. This year, the speaker said, the Association of Sugar Producers of Puerto Rico have recently announced the possibility of a Puerto Rican deficit of 50,000 tons. If such a deficit develops, it could add 38,000 tons to the beet quota if the beet area and the mainland cane area are the only domestic areas which can use the deficit.

Shields dealt at some length with a factual analysis to show how official forecasts of beet sugar quota increases which might be expected to accrue under provisions of the 1956 Sugar Act amendments were proving out. He said unusual developments—including the stock-piling of possibly as much as 300,000 tons of sugar in this country in 1956—had affected the U. S. market last year, but added that there is no conclusive evidence yet that the official forecasts will not prove to be approximately correct. He referred specifically to the forecast that during the five-year 1956-60 period of the present extension of the Act, the beet sugar quota would increase by a total of 171,000 tons of sugar.

In analysing what affect the quota increases were having on the United States market, Shields presented figures showing that the sugar market in the beet sugar industry's normal marketing area, comprising 25 western and mid-western states, was expanding at a rate more than twice as great as the increasing beet sugar quotas.

The speaker cited the record to show that in 1955 the beet sugar industry marketed 99.4 percent of its production in its normal market-

ing area; and in 1956, with a considerably larger quota, marketed 99.5 percent of its total production in its normal marketing area.

The facts show, Shields declared, that the beet sugar industry has the ability to meet enlarging marketing opportunities and that the potential for absorbing increased quotas is more than ample in the beet sugar industry's normal marketing area.

Shields emphasized that forces external to the beet sugar industry vitally affect beet sugar marketings, listing among these the level and pattern of cane sugar prices, both raw and refined; marketing practices of cane sugar sellers; and freight rate structures. He added that basic to the whole marketing picture was a general recognition that one of the major premises on which the Sugar Act rests is that the beet sugar industry is expected to market its quota.

## IN THE FIELD

(Continued from page 181)

ducted on deep tillage. The results of the experiments show that deep tillage is of greater benefit on light textured soils than on the heavier clay soils. A larger number of tests have been placed in the sugar belt this past fall and more information will be available after the next harvest.

Mr. Mansel Mayeux discussed the work being conducted on an automatic feeding device for a cane planting machine. Mr. Mayeux is a very capable engineer and hopes are high for his success.

Mr. W. H. (Nick) Carter is working on a new quarter drain plow. A satisfactory quarter drain plow is a tool very much needed in the sugar belt and for many reasons, not to mention the cost of hand shoveling plus the scarcity of decent

(Continued on next page)

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mules remaining in the belt. An operator of the present quarter drain plow has this suggestion—"take the dust out of the machine."

Dr. Chilton did his usual good job in telling about the production of true seed of sugar cane at Baton Rouge. He was very confident that the methods employed in the production of true seed at Baton Rouge over the past few years are sound and expressed enthusiasm and high hopes for a Louisiana bred commercial variety of sugar cane for the future.

Mr. E. J. Concienne and Dr. Dale Newsom discussed the sugar cane borer situation. They indicated that overwintering population of borers was not as large as last year but nevertheless sufficiently large enough to be classified as severe.

Mr. Malcolm Duhe, Acting Chairman at the afternoon session of meeting, made a special point of congratulating Mr. Concienne for the very excellent work he had conducted over the years. Dr. Newsom, Head of Entomology Research, followed by saying some very fine things about Mr. Concienne. Mr. Concienne received a very hardy hand from his friends and colleagues.

Dr. T. J. Stafford discussed the experiments conducted on the test fields located at 6 places in the sugar belt. Of particular interest were his comments on N. Co. 310. The variety exceeded C. P. 44-101 in yield of sugar per acre at most test fields. The exception was in first stubble on two light soil tests. For the Bunkie area tests indicate it is far superior to all other varieties. Dr. Stafford also said that N. Co. 310's most serious disadvantage is its tendency to lodge, but the pick-up attachment on the harvester worked well in the variety test last year.

Mr. E. C. Simon gave a report on tests conducted on unreleased varieties on the L. S. U. Station. From the data Mr. Simon presented C. P. 52-68, a variety now being increased, shows promise for release in the future. Mr. Simon is a very careful investigator and those working on the variety program place much stock in his opinion and data.

It is forever worthy of mention that the Louisiana sugar industry is in a far better position because of the work carried on by the men at L. S. U. and the U. S. D. A.

———o———

## UP FRONT

(Continued from page 180)

years as President.

He closed his talk with these remarks.

"The work of the Exchange, to my mind, is most vital to the efficient and successful operation of the Louisiana Sugar Industry, and although my term of office has now expired, I will always be available to serve the Exchange in any capacity possible."

We are printing Mr. Levert's address beginning on page 183 of this issue.

### F. Evans Farwell Elected

The New Board of Directors of the Exchange held its first meeting immediately following the Annual Meeting and unanimously elected F. Evans Farwell, another outstanding sugar planter, to the presidency of the Exchange.

Other officers elected by the Board of Directors are F. A. Graugnard, Jr., 1st Vice-President; E. A. Burguieres, 2nd Vice-President; Irving Legendre, 3rd Vice-President; Samuel H. Livaudais, Jr., Secretary; Louis P. LeBourgeois, Treasurer, and A. W. Dykers, Executive Secretary.

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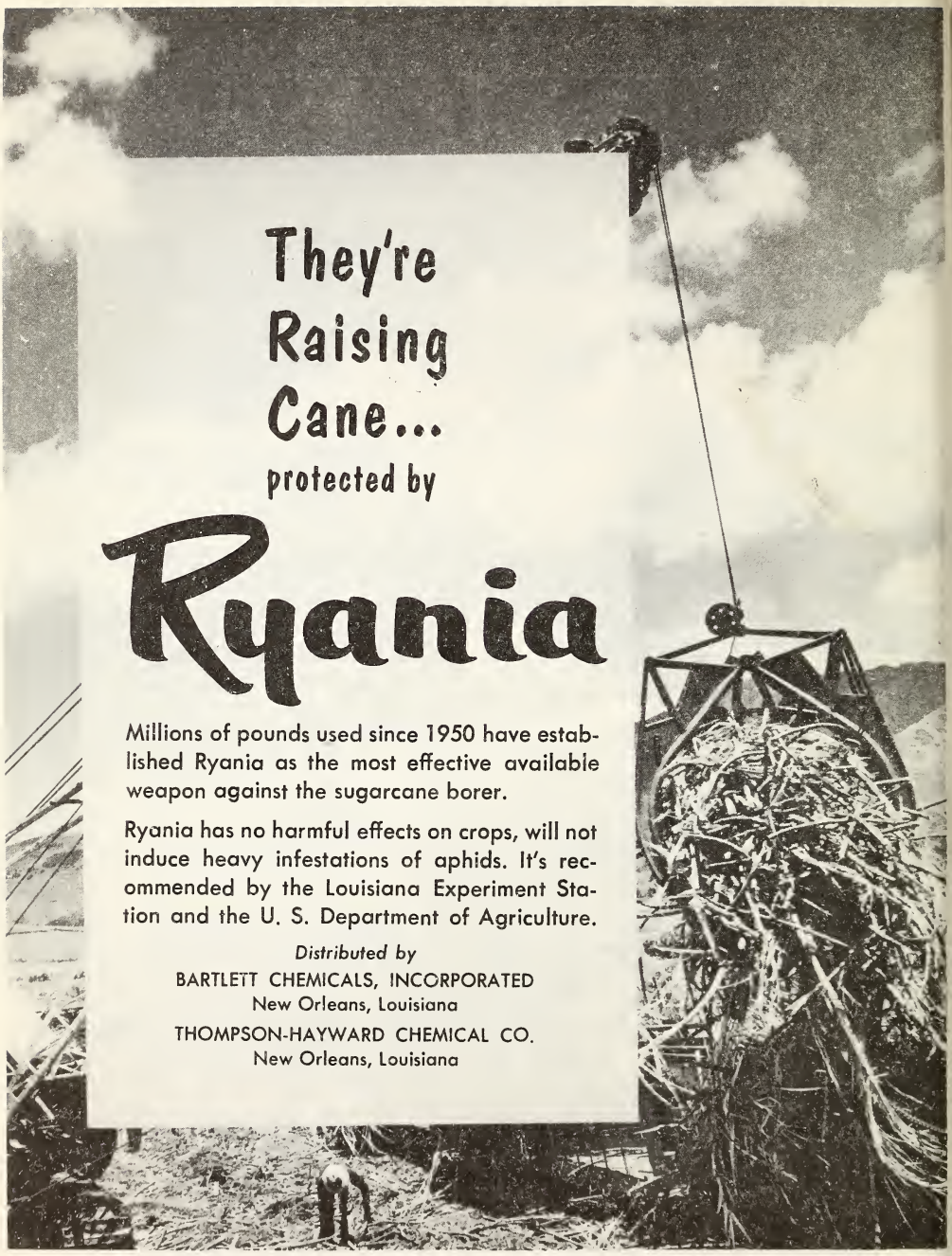

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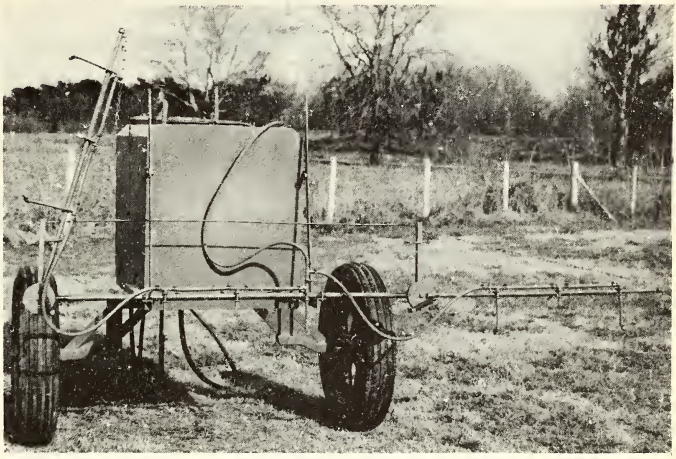

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# UP FRONT WITH THE LEAGUE

*by A. W. Dykers*

## Raw Sugar Pricing

We have been asked by Mr. F. Evans Farwell, President of the Louisiana Sugar Exchange, to give publicity to the following announcement.

"At the Annual Meeting of the Exchange held in New Orleans on March 27th 1957 it was suggested that, after the completion of the 1956-57 pricing period, the present rules of the Exchange governing spot quotations of raw sugar be reviewed. These rules, which were adopted in 1949, are as follows:

RULES GOVERNING SALES OF LOUISIANA RAW SUGAR

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*Terms*—F.O.B. New Orleans duty paid basis.

*Quantity* — Not less than 1,000 bag of Louisiana raw sugar or less than 1,000 long tons of offshore raw sugar.

*Kind of Sale*—Only spot sales (delivery within 35 days) covered by contract between a Louisiana raw sugar producer, or a seller of offshore raw sugar, and any one of the refiners listed above shall be considered a spot sale of raw sugar. Only sales covered by one contract shall be considered, and no resales from one refiner to another refiner shall be considered.

*Time Limit for Sales*—Sales completed before 2:00 P.M. shall be used in arriving at a price for the day. All sales completed after 2:00 P.M. shall be carried over to the following market day and included in the sales of that day. The Exchange week shall be Friday through Thursday.

*Holidays* — The Louisiana Sugar Exchange, Inc., shall be closed when the New York sugar market is closed.

*Daily Average Prices*—All daily average prices shall be the simple average of the spot sales of Louisiana raws or offshore raws to the refiners listed above on any given day. When no spot sales of Louisiana raws or offshore raws to the refiners listed above are reported on any given day the quotation for that day shall be the daily spot quotation of the New York Coffee & Sugar Exchange adjusted to a duty paid delivered New Orleans basis by using the freight rate differential from Cuba, if any, existing between New York and New Orleans as furnished by James E. Ward & Co., of New York.

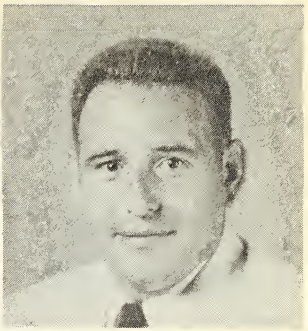
*Weekly Average Prices* — Weekly average prices shall be established by taking the simple average of the daily quotations of this Exchange.

*Average Price for the Season* — The Season's average price shall be established by taking the simple average of the weekly average prices issued by this Exchange applicable to the Cane Purchase Contract Period.

(Continued on page 205)

# IN THE FIELD WITH LLOYD LAUDEN

*by Lloyd L. Lauden*



## Crop Conditions

Cane farmers all over the sugar belt are much disturbed over the amount of grass on the crop. In addition to the grass, Sour Clover and other winter legumes have made excellent growth this year.

Frequent rainfall thus far this year has made it almost impossible to cultivate. At the time of this writing, many acres of cane have not yet been off-barred and, in general, cultivation is considerably behind schedule.

But on the bright side, and with few exceptions, a good stand of cane can be seen all over the belt both in plant cane and in stubble cane even if the winter grass and Sour Clover must be moved aside to see it.

Farmers who were fortunate enough to have had sufficient dry weather three weeks ago to apply chemical weed killers are finding the winter grass and clover dying out now and a good stand of cane is showing through.

Most farmers have sufficient power to cultivate the entire crop fairly rapidly. Two weeks of dry weather starting now could do much to allow a catch up in cultivation and, in the writer's opinion, by May 15 the crop will be no worse than usual for that time of year.

The Johnson grass problem will no doubt be greater than usual this year, but even this pest can be handled.

Most farmers are now in a hurry to fertilize. Some difficulty will be encountered in preparing heavy clay soils to receive anhydrous ammonia. Because of the nature of heavy clay soils extra working will be required to break up clods to prevent a great loss of ammonia gas when fertilizing. Deep placement of anhydrous ammonia will prevent to some degree the escape of ammonia gas. It must be remembered that deep placement should not be used as an excuse for a poor job of soil preparation.

A number of farmers on the Teche and on the lower Mississippi River are applying potash and phosphate to the lighter sandy soils this year. Farmers who applied potash and phosphate to the lighter soils last year reported an increase in tons of cane per acre.

Stands in cane that were heat treated last year for the control of Stunting Disease are generally good. The increase from the seed treated in prior years is excellent and stands are much better than in field run cane. More cane farmers should visit plantations where a Stunting Disease control program is underway. To see the difference in the appearance of disease-free cane as compared to field run cane is the best way to convince a farmer of the need for controlling the disease.

If the industry can overlook the fact that cultivation is behind schedule and that the crop is a little ragged from grass, it will then see the making of another good crop. We are blessed again this year with a good stand of cane which is the first requirement for a good crop.

# IN WASHINGTON WITH JOE FERRIS

*by Josiah Ferris*

The U. S. Department of Agriculture announced a public hearing on Florida sugarcane wage rates for the period July 1, 1957 through June 30, 1958, and on prices for the 1957 crop. The hearing will be held May 9, 1957 in the Sugarland Park Auditorium, Clewiston, Florida, beginning at 10 a.m.

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After making a fast start on budget cuts, the House of Representatives slowed down. The Appropriations Committee has chopped off about eight hundred million dollars from a half dozen big money bills, but the eight hundred million is far short of the committee's original goal of a thirteen and a half billion cut. The real tough appropriations have yet to be considered and hopes for genuine federal economy are beginning to dim.

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Senator McClellan's special committee investigating labor scandals has succeeded Ringling Brothers Circus as the "biggest show on earth". No investigating committee in history has aroused so much interest among blase Washingtonians.

Now that Dave Beck and his assorted cast of characters from the West Coast have completed their act, the scene has shifted to New York and Pennsylvania. Committee investigators forecast that bigger and dirtier labor scandals are going to be unveiled. Union members themselves have sent in more than twenty-four thousand pretty hot tips to the committee, giving names, dates and circumstances of improprieties in their own unions.

After the committee has finished with crooked labor racketeers it will devote its attention to crooked businessmen. Investigators say they have information which indicates there is a vast business underworld just as dirty and unscrupulous as the the labor underworld.

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Dr. Frederick J. Stare of the Harvard School of Public Health put in a good plug for sugar in diets in an exclusive interview in the March 29th issue of U. S. News and World Report.

In his interview Dr. Stare points out the danger of obesity and advocates—"the cut down, don't cut out" theory of reducing. He points out that the calories in sugar are no more fattening than the calories in any other article of food.

One of the world's foremost authorities on foods and health, Dr. Stare covers in his question and answer interview such important questions as, "Why eating less can make you live longer"; "The importance of controlling fats in your diet"; "The latest research on what causes heart disease"; "How you can guard against coronary troubles"; "Can tension and hard work harm the heart"? and "Why many heart attacks occur at midnight".

According to Dr. Stare, sugar that is in a readily soluble form, the way it is in most of our foods, does not cause dental decay. The doctor said he knows of no reason why sugar, as most of us consume it, and in the amounts we consume, is harmful.

# A NEW METHOD OF HANDLING LOOSE CANE IN LOUISIANA

*By Ridley J. LeBlanc, General Manager, Gulf States Land and Industries, Inc., Raceland Factory*
*Presented to the February 26, 1957 Meeting of the American Society of Sugar Technologists, Thibodaux, Louisiana*

In 1956 Gulf States Land and Industries, Inc., put into operation at their Raceland properties, an idea developed several years ago, which had as its aim reducing cost and increasing speed and efficiency of the harvest both in the field and on the Mill yard.

Prior to this plan Raceland administration cane was hauled directly from the fields in a conventional manner to the factory and stored for grinding at night.

This entailed fixing and tying slings in the field, hooking and tripping slings at the factory, unhooking and reloading slings into the carts before going back to the fields for reloading. The cane from the Napoleonville properties was handled in the field in the same manner and shipped to the Raceland Factory by rail and held in storage for night grinding.

The new operation required changes in the field hauling equipment as well as yard unloading and Mill feeding facilities.

Field wagons were modified by raising sides and ends 18" higher than the conventional wagons. A net made of four chains was permanently attached to the right side of each wagon. This net extended down the right side, across the bottom, and up the left side of the wagon in the same manner in which conventional slings are arranged for field loading. The net is attached to a pipe or bar on the outer left side of the wagon and fits into two sockets on both ends of the cane cart. The dragline operator hooks the bar, raises the load, dumps and returns the net and the bar to its proper position for reloading. The factory grab then moves the cane from the pit to either storage or to feeder table for immediate grinding.

This new operation of handling Raceland administration cane saved 113 man hours per day. This amounted to a savings of 7648 man hours during the 1956 grinding season. In addition to the savings in labor, this operation also made it possible to harvest the crop with a smaller total labor force, in spite of Hurricane Flossy. This alone is an added comfort since scarcity of labor becomes more pressing each year.

Changes in the Napoleonville operation were limited to transporting cane from the field derricks to the Raceland Factory. Ten dump type trailer bodies were designed and constructed for this purpose. The Trailer beds measure 36' in length and 8' in width. Three box type compartments each measuring 12' x 8' x 8'4" are hinged to the right side of the trailer bed. Each compartment contains a full length door hinged at the top of the right side of each compartment. Each door has two latches operated from the left side to insure safety.

An effort was made at the Napoleonville properties to load field wagons to 12' length bundles to fit into the compartments. The 12' length loads were lifted from the tractor wagons in slings by a dragline and was either loaded loose in the compartments for immediate shipment or was stored in slings for shipping in the same manner at night.

Upon arrival at the mill yard at Raceland the cane was handled in the following manner. For grinding immediately, the cane was dumped

(Continued on page 206)

# FEDERAL USE TAX ON HIGHWAY MOTOR VEHICLES

It has come to the attention of the League that there is apparently confusion and misunderstanding with respect to the applicability of the Federal Use Tax on Highway Motor Vehicles.

This tax became effective on July 1, 1956. The tax is due on July 1, of each year by the person in whose name the highway vehicle is registered. The tax is at the rate of $1.50 a year for each 1,000 pounds of taxable gross weight or fraction thereof.

Any vehicle which is propelled by means of its own motor and which is of a type used for highway transportation is a highway motor vehicle for purposes of the tax. Trucks, truck-tractors and buses are highway motor vehicles. Trailers and semi-trailers are not. Farm tractors, earth movers, bulldozers and other similar vehicles, which are designed and manufactured for a purpose other than highway transportation, are not considered to be highway motor vehicles, even though they may occasionally use the public highways.

Many vehicles used for transportation purposes are not taxable. For the owner to determine whether a vehicle is taxable and if so, the amount of tax due, he must first ascertain the "actual unloaded weight" of the vehicle. The "actual unloaded weight" means the empty or tare weight of the vehicle fully equipped for service, including a full supply of lubricants, fuel and water. The weight of the driver is not included. After determining the actual unloaded weight, the taxable gross weight is based on an assigned weight applicable to the particular

**USE TAX SCHEDULE**

| CATEGORY | | Taxable gross weight (pounds) |
|---|---|---|
| | **Single Units** | |
| A | 2 axled truck equipped for use as a single unit with actual unloaded weight of 13,000 lbs. or more | 27,000 |
| B | 3 or 4 axled truck equipped for use as a single unit, with actual unloaded weight of at least 13,000 lbs. and less than 16,000 lbs. | 30,000 |
| C | 3 or 4 axled truck equipped for use as a single unit with actual unloaded weight of 16,000 lbs. or more | 40,000 |
| | **Combinations** | |
| D | 2 axled truck-tractor with actual unloaded weight of at least 5,500 lbs. and less than 7,000 lbs. | 30,000 |
| E | 2 axled truck-tractor with actual unloaded weight of at least 7,000 lbs. and less than 9,500 lbs. | 40,000 |
| F | 2 axled truck-tractor with actual unloaded weight of 9,500 lbs. or more | 50,000 |
| G | 2 axled truck with actual unloaded weight of at least 9,000 lbs. and less than 12,000 lbs. and equipped for use in combinations | 40,000 |
| H | 2 axled truck with actual unloaded weight of 12,000 lbs. or more and equipped for use in combinations | 55,000 |
| I | 3 or 4 axled truck equipped for use in combinations | 60,000 |
| J | 3 or 4 axled truck-tractor | 60,000 |
| | **Buses** | |
| K | Buses — Taxable gross weight is actual unloaded weight of vehicle plus 150 lbs. for each unit of seating capacity provided for passengers and driver | |

# STATE AGRICULTURAL CREDIT CORPORATION PASSES RESOLUTION

*Be It Resolved* by the Board of Directors of the State Agricultural Credit Corporation that

*Whereas*, the State Agricultural Credit Corporation was established in 1926 by a group of public spirited citizens, who recognized the necessity of the creation of a private lending agency which could assure credit to the Louisiana Sugar Industry, through the utilization of the discount facilities of the Federal Farm Credit Administration, predicated upon sound lending policy, coupled with effective supervision of the borrowers' operations to insure the success of such operations and the eventual repayment of the loans made by the State Agricultural Credit Corporation to its customers; and,

*Whereas*, the State Agricultural Credit Corporation has consistently, during its thirty-one year existence, supplied credit facilities to sugar producers at minimum costs upon the re-discount rate offered by the Federal Farm Credit Administration; and,

*Whereas*, notwithstanding the established policy of State Agricultural Credit Corporation to make credit available to sugar producers at the lowest possible interest cost, the State Agricultural Credit Corporation, in common with most other lending agencies, because of the present tight money situation in the country, has been constrained to increase its interest rates to its borrowers; and,

*Whereas*, the prices of sugar and sugarcane have not, during the past several years, risen in proportion to the increases in prices paid by farmers for the equipment and supplies they require nor in proportion to the advances in prices of other agricultural commodities; and,

*Whereas*, the United States Department of Agriculture has, through its regulations, refused to allow the price of sugar to advance in proportion to the price advances of other agricultural commodities to general price levels, despite the fact that the Federal Sugar Act contemplates that the prices of sugar will be kept proportionate to general price levels; and,

*Whereas*, sugar producers are confronted not only with increased

(Continued on page 206)

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category of the vehicle which is found in the "Use Tax Schedule".

The question apparently causing much confusion and misunderstanding is whether in determining the actual unloaded weight of a truck-tractor there should be weighed only the truck-tractor or the truck-tractor and semi-trailer. It is our very definite understanding that only the truck-trailer should be weighed. Trailers and semi-trailers are not considered as highway motor vehicles and should not be weighed. If the unloaded weight of the truck-tractor (not including semi-trailer) is less than 5,500 pounds, no tax is due. Other categories with applicable unloaded weights and taxable gross weights are shown on the Use Tax Schedule.

If in any year the first use of a taxable vehicle is after July 31, the tax is reckoned proportionately from the first day of the month in which the vehicle has been used on the public highways, to and including the 30th day of the following June. Therefore, if a vehicle is used for the first time during the month of October, the owner owes 9/12ths of the annual tax.

# RECENT SCIENTIFIC FINDINGS SHOW HOW SUGAR CAN HELP YOU LOSE WEIGHT WITH LESS HUNGER—LESS FATIGUE

*From Sugar Information, Inc.*

Most people who diet want to do it fast.

Do it and get it over with, they say. In their zeal, they often fall prey to one or another of the bizarre, unbalanced "wonder" diets. Sometimes they eliminate all sugar, and slash many important foods to a level that wouldn't satisfy the nutritional requirements of a small child.

Soon after, fatigue—both physical and mental fatigue—becomes a daily problem for them. Science says this is Nature flashing a red light.

## Why Do You Get Tired?

Diet or no diet, energy is the first need of the body, even taking precedence over maintenance and repair. Whenever energy reserves fall, Nature signals to the mind and body to slow down. And so any physical effort becomes tiring and mental performance falls off.

The trouble is, few people can afford to slow down. The businessman keeps on driving himself, growing irritable and hard to please. The tired mother nags at her family, and often finds herself becoming unaccountably depressed over trifles.

It is no wonder these people quit dieting—and go back to their old eating habits.

Is there any real answer? Can you keep your energy up while the pounds go down?

## What To Do About It

The most authoritative scientific thinking today says the best plan, if you want to control your weight, is to continue to eat a normal balance of foods—keep on eating the foods you have been accustomed to having. Don't cut them *out*, simply cut down on the portions.

All foods have calories. Calories are the units of energy your body needs for every action, even breathing. However, in normal eating, about two-thirds of these energy calories are in the form of starches and sweets. Easy to understand why cutting out either of these foods can cause the body to send out fatigue warnings.

## How Sugar Helps

Easy to understand, too, why the newer reducing diets call for mid-morning or mid-afternoon "energy breaks" in the form of a sugar-sweetened beverage, or a cookie, or a piece of candy. These have been called "Scientific Nibbles."

The reason is simply that sugar supplies Nature's "top priority" calories. Ounce for ounce, no other food supplies energy so fast. (And, of course, calories consumed as energy can never be deposited as fat.)

Sugar can help you live with your diet in other important ways, too. It helps keep your appetite satisfied on less food. And it makes what you do eat more enjoyable.

The newer knowledge of nutrition now says there isn't a basic dieting reason in the world why any normal, healthy person should have to use artificial, immitation sweeteners (with no energy value) instead of the natural sweetener, sugar.

These are facts. In their light, why would anyone with a choice to make—particularly anyone on a reducing diet — short - change himself on the sugar which supplies the vigor and quick energy his body needs?

Sugar deliveries, by type of product or business of buyer and by type of sugar, calendar year, 1956

UNITED STATES

| Product or business of buyer | Beet | Cane | Imported D.C. | Liquid 2/ | Total sugar |
|---|---|---|---|---|---|
| | 100-pound bag equivalent | | | | |
| Industrial | | | | | |
| Bakery, cereal and allied products | 5,800,739 | 10,150,424 | 756,616 | 1,168,005 | 17,875,784 |
| Confectionery and related products | 3,102,410 | 7,243,749 | 1,744,479 | 2,511,194 | 14,601,832 |
| Ice cream and dairy products | 1,399,845 | 1,897,452 | 285,310 | 2,801,445 | 6,384,052 |
| Beverages | 2,317,475 | 8,148,402 | 1,619,595 | 6,466,413 | 18,551,885 |
| Canned, bottled, frozen foods; jams, jellies and preserves | 4,479,240 | 3,495,283 | 1,987,859 | 4,734,922 | 14,697,304 |
| Multiple and all other food uses | 1,139,059 | 3,412,522 | 65,501 | 1,420,281 | 6,037,363 |
| Non-food products | 39,750 | 527,589 | 343,737 | 104,051 | 1,015,127 |
| Sub-total | 18,278,518 | 34,875,421 | 6,803,097 | 19,206,311 | 79,163,347 |
| Non-industrial | | | | | |
| Hotels, restaurants, institutions | 50,550 | 704,477 | 21,230 | 36,478 | 812,735 |
| Wholesale grocers, jobbers, sugar dealers | 10,811,066 | 41,791,321 | 2,934,101 | 431,950 | 55,968,438 |
| Retail grocers, chain stores, super markets | 3,717,741 | 18,345,757 | 359,642 | 58,913 | 22,482,053 |
| All other deliveries, including deliveries to Government agencies | 417,287 | 1,582,437 | 14,795 | 2,229 | 2,016,748 |
| Sub-total | 14,996,644 | 62,423,992 | 3,329,768 | 529,570 | 81,279,974 |
| TOTAL DELIVERIES | 33,275,162 | 97,299,413 | 10,132,865 | 19,735,881 | 160,443,321 |
| Deliveries in consumer-size packages (less than 100 lbs.) | 8,294,266 | 44,594,634 | 704,342 | - | 53,593,242 |

[1] Represents approximately 96 percent of deliveries by primary distributors in continental United States.

[2] Refined equivalent. Source: Reports of primary distributors of sugar to Sugar Division, CSS.

## WEEKLY AVERAGE PRICES

The weekly average prices issued by the Louisiana Sugar Exchange since the start of the 1956 - 57 pricing period have been as follows:

Week ending October 11, 1956
Raws 6.15, Blackstrap 21.20

Week ending October 18, 1956
Raws 6.17, Blackstrap 22.00

Week ending October 25, 1956
Raws 6.24, Blackstrap 23.30

Week ending November 1, 1956
Raws 6.40, Blackstrap 23.96

Week ending November 8, 1956
Raws 6.225, Blackstrap 24.00

Week ending November 15, 1956
Raws 6.18, Blackstrap 24.75

Week ending November 22, 1956
Raws 6.17, Blackstrap 25.42

Week ending November 29, 1956
Raws 6.29, Blackstrap 27.00

Week ending December 6, 1956
Raws 6.38, Blackstrap 27.00

Week ending December 13, 1956
Raws 6.31, Blackstrap 27.00

Week ending December 20, 1956
Raws 6.26, Blackstrap 27.00

Week ending December 27, 1956
Raws 6.28, Blackstrap 27.00

Week ending January 3, 1957
Raws 6.31, Blackstrap 27.00

Week ending January 10, 1957
Raws 6.34, Blackstrap 27.00

Week ending January 17, 1957
Raws 6.37, Blackstrap 27.00

Week ending January 24, 1957
Raws 6.22, Blackstrap 27.00

Week ending January 31, 1957
Raws 6.12, Blackstrap 27.00

Week ending February 7, 1957
Raws 6.01, Blackstrap 27.00

Week ending February 14, 1957
Raws 6.015, Blackstrap 27.00

Week ending February 21, 1957
Raws 6.02, Blackstrap 26.00

Week ending February 28, 1957
Raws 6.04, Blackstrap 26.00

SEASON'S AVERAGE FOR BLACKSTRAP 25.7443

Week ending March 7, 1957
Raws 6.08

Week ending March 14, 1957
Raws 6.09

Week ending March 21, 1957
Raws 6.14

Week ending March 28, 1957
Raws 6.12

Week ending April 4, 1957
Raws 6.11

Week ending April 11, 1957
Raws 6.10

**LOUISIANA SEASON'S AVERAGE PRICES FOR SUGAR AND MOLASSES AND PAYMENTS TO GROWERS FROM PROCESSORS FOR SUGAR AND MOLASSES—(1947-1956)**

| Year | Season's Average Price | | Payment to Grower from Processor per ton cane | |
|---|---|---|---|---|
| | Raw Sugar Per Pound | Molasses Per Gallon | For Sugar | For Molasses |
| | cents | cents | dollars | dollars |
| 1947 | 6.206 | 26.76 | 6.634 | .609 |
| 1948 | 5.618 | 9.70 | 5.821 | .058 |
| 1949 | 5.818 | 5.64 | 6.199 | .00 |
| 1950 | 6.194 | 29.23 | 7.146 | .738 |
| 1951 | 5.822 | 28.68 | 5.149 | .723 |
| 1952 | 6.209 | 8.80 | 6.452 | .097 |
| 1953 | 6.093 | 10.01 | 6.963 | .141 |
| 1954 | 5.959 | 9.75 | 6.582 | .133 |
| 1955 | 5.893 | 10.78 | 6.085 | .170 |
| 1956 | Est. 6.20 | 25.74 | Est. 7.170 | .721 |

Season's Average Through April 11, 1957.

Raws 6.1904

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## UP FRONT

(Continued from page 196)

*Correction of Quotations* — The Exchange reserves the right to adjust any erroneous quotations.

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"If any cane grower, sugar processor, refiner, broker, or anyone else affected by the quotations issued by the Louisiana Sugar Exchange, wishes to suggest changes in these rules, he is herewith invited to put his suggestions in writing and send them to the office of the Exchange, 415 Whitney Building, New Orleans 12, La.

The cooperation of the industry will be greatly appreciated."

### John Victor Fourmy

It is with deep regret that we report the death of John Victor Fourmy at Hotel Dieu in New Orleans, on March 28, 1957.

Mr. Fourmy, who lived in Reserve, La., was 57 years old. He had been connected with Godchaux Sugars, Inc. and their successor, Gulf States Land and Industries, Inc. for the past ten years. He was a native of Franklin and attended Louisiana State University.

Mr. Fourmy joined the Godchaux organization in 1947 after working for the Felsmere Sugar Producers Association, of Felsmere, Florida. At the time of his sudden death he was purchasing agent for Gulf States Land & Industries, Inc. with headquarters in New Orleans.

We join with Mr. Fourmy's host of friends throughout the Louisiana sugar district in extending deepest sympathy to the family of the deceased who was a credit to himself, his community, and the Louisiana sugar industry.

### Distinguished Visitor

We had the pleasure early this month of meeting Mr. Cenon R. FlorCruz, Assistant General Manager of the Philippine Sugar Institute, who spent about two weeks in Louisiana studying our industry.

We hope that Mr. FlorCruz, who is a very pleasant gentleman, enjoyed a pleasant visit.

### Elect McCarthy

Richard McCarthy, Jr., former Vice-President of Godchaux Sugars, Inc. and present Vice-President of Gulf States Land and Industries, Inc. has been elected by the Executive Committee of the League to finish the unexpired term of Walter Godchaux, Jr. as a member of the Executive Committee.

Mr. Godchaux resigned a few months ago to become President of the National Blow Pipe & Manufacturing Co., Inc.

Gulf States Land & Industries, Inc. is the firm formed by Webb & Knapp, Inc., not so long ago to operate the sugar properties acquired by them from Godchaux Sugars, Inc. The Reserve plant has since been purchased by the National Sugar Refining Co., but Gulf States operates Raceland and other extensive sugar properties in the Reserve and Raceland areas.

Mr. McCarthy will be a valuable addition to the policy making body of the American Sugar Cane League.

### Big Plow

Mr. Eddie Dufresne, of Luling, La., called us the other day and asked us to ask all sugar refineries having sugar or molasses for sale in truck lots to contact him in Luling.

While on the phone, Mr. Dufresne said that he has a big plow that will help the industry grow bigger and better cane crops and suggested that he be contacted for further information.

## RESOLUTION

(Continued from page 201)

production cost because of price advances of items requisite to the production of sugar, including higher interest charges, but are also adversely affected by the fact that sugar prices have declined in proportion to general price levels,

*Now, Therefore, Be It Resolved* that it is the sense of the Board of Directors of the State Agricultural Credit Corporation that Honorable Ezra Taft Benson, Secretary of Agriculture, be respectfully requested to review the established price policy of the Sugar Division of the United States Department of Agriculture, with a view to adjusting said price policy in order to allow for an increase of sugar prices to a level that would make such prices proportionate to the general price levels prevailing in the country and to the price levels of other agricultural commodities, so that the sugar producers might be relieved of the "price-cost squeeze" under the existing price-cost relationships which result in part from the aforesaid policy of the Sugar Division of the United States Department of Agriculture.

*Be It Further Resolved* that a copy of these resolutions be submitted to the Honorable Ezra Taft Benson, Secretary of Agriculture of the United States, and to Mr. Lawrence Meyers, Head of the Sugar Division of the United States Department of Agriculture.

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## LOOSE CANE

(Continued from page 199)

from the compartments into a pit and picked up by the factory tower grab and placed on feeder tables. For other than immediate grinding, the compartments were dumped by a dragline into a pit and stored by derrick grabs.

At the beginning of grinding much difficulty was encountered in dumping cane from the compartments. However, with modification of the door and with experience and time, unloading conditions were improved although not entirely satisfactory. Plans are being considered to further modify the doors so that the top hinged cross member will in no way interfere with dumping of the cane. This method of handling the cane of the Napoleonville properties afforded savings in labor, freight costs, and in efficiency.

With this new method of handling loose cane in side-dump trucks, the switch Locomotive at Raceland was not used and the scrapping of cane on the tracks was completely eliminated. This operation plus other revisions at the cane shed affected a further saving in the cost of operation.

Cost figures indicate that a substantial saving in freight was realized as well as the receipt of fresher cane which contributed to greater efficiency in the yard and in mill operation generally. The grinding of fresher cane contributed in no small measure to an increased recovery of such sugar realized.

Compartment type delivery trucks was not only unique in appearance, but also made travel on the highway comparatively safer than the conventional method of truck hauling.

Acknowledgement is given Mr. Charles A. Wainwright, Chief Engineer and his Staff for designing and engineering the new operation. Without this valuable assistance much less would have been accomplished.

Acknowledgement is also advanced Mr. Russell Ramp, U.S.D.A., Houma Station, for his valuable assistance

and interest in the project.

From experience gained during the 1956 harvesting season, the industry should seriously consider both the Tractor Chain-net method of dumping as discussed, as well as the compartment dump type Truck method. Consideration should also be given to the conversion of conventional type truck-trailers to the Chain-net method of dumping. It is felt that the conventional truck trailer can be converted at a reasonable cost.


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# THE SUGAR BULLETIN

35 — No. 15 MAY 1, 1957

*Official Bulletin of the American Sugar Cane League of the U. S. A.*

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**Just as we go to press word is received of the death of Marcel J. Voorhies. Mr. Voorhies died at his home in Baton Rouge at 8 P.M. on Sunday, April 28, 1957.**

Published on the First and Fifteenth of each month
in the interests of the Domestic Sugar Cane Industry

THE
# SUGAR BULLETIN

414 Whitney Bldg., New Orleans 12

Gilbert J. Durbin, Editor — Andrew W. Dykers, Managing Editor

Lloyd L. Lauden, Agronomist and Field Representative

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# UP FRONT WITH THE LEAGUE

*by A. W. Dykers*

### Correction

We pulled a king sized boner in the last issue of the Sugar Bulletin and, as usual, it happened at a most inopportune time in the most inappropriate place.

Here is what happened. Our expert on laws and such went to a lot of trouble to write an explanation of the Federal Use Tax on highway motor vehicles that was supposed to calm the confusion and clear up the misunderstanding about the Use Tax on trucks. The explanation began on page 200 and ended on page 201 of our April 15th issue. In a paragraph on page 201, our very capable expert stated that the question apparently causing much confusion and misunderstanding is whether, in determining the actual unloaded weight of a truck-tractor, there should be weighed only the *truck-tractor* or the *truck-tractor and semi-trailer* . . . then it happened!

In the Bulletin we had this: "It is our very definite understanding that only the *truck-trailer* should be weighed."

Our expert actually said this: "It is our definite understanding that only the *truck-tractor* should be weighed."

The question now is, did we calm the confusion or confound it? All of which is very embarrassing.

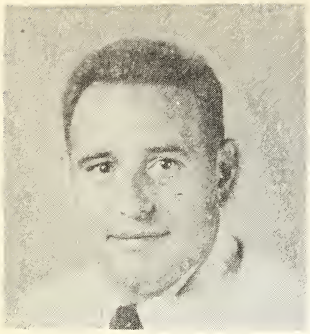
Please just go out and weigh your *truck-tractor* and forget we said anything about weighing your truck-trailer, which was a mistake.

### Cane Payments

While we are explaining things, perhaps we should explain the seven dollars and seventeen cents ($7.17) estimated factory payment to growers per ton of cane this year contained in the table on page 204 of our last issue (April 15, 1957).

We wrote the following letter to one of our readers which we hope clears up this matter satisfactorily.

> "With reference to the table on page 204 of the April 15th issue of the Sugar Bulletin estimating the grower income from sugar per ton of cane from the 1956 crop at $7.17, this is an overall estimate for the entire State and is not intended to indicate the price that any particular mill or area will pay for cane.
>
> The estimate is based on a *net* ton of cane and growers in general produced premium cane last season. The average recovery exceeded 179 pounds of sugar per ton of cane, according to the official figures of Louisiana ASC Committee of the U.S.D.A.
>
> The ASC will advise the industry at the close of the pricing period just what the price is for a standard ton of cane in zones A, B and C. These prices will be less than the $7.17 shown in the Sugar Bulletin of April 15th because they will refer to standard tons and not *net* tons.
>
> Later, probably in July, when the ASC issues final figures on the 1956 crop they will include the exact average amount per *net* ton paid by processors to growers. That figure, we believe, will be very close to the $7.17 estimate in the April 15th issue of the Sugar Bulletin."



# IN THE FIELD WITH LLOYD LAUDEN

*by Lloyd L. Lauden*

## Another Look at the Crop

A general good appearance of the fields is slowly taking place in spite of continuous rainfall. Work is progressing, but cultivation is still behind schedule.

The bright spot in the picture is the fact that a good stand of cane exists in general throughout the belt. Hopes are better now than two weeks ago. A few dry days have made the difference. The ridges, high spots, and the well drained lighter soils have been worked, but much of the heavier clay soils still remain to be cultivated.

The removal of grass and clover, and the increase in both day and night temperatures have markedly improved the color of the crop. Fields that have been fertilized really show a color change.

Most varieties are suckering nicely. C. P. 44-101 plant cane is the exception. It is suckering rather slowly. A careful check will reveal that the suckers are there but they have not yet emerged. Although stands are better now than in many years, small gaps always exist to some extent. Gaps in stands of C. P. 36-105, N. Co. 310, C. P. 48-103, C. P. 47-193 and C. P. 44-155 are still filling in. Seed pieces of most of these varieties are still fairly sound. In general, a gap in C. P. 44-101 now will be a gap at harvest time. The seed piece in the gap has completely deteriorated.

Fertilizing is well underway, but mostly on the higher spots, and on the lighter better drained soils. Most farmers are justifiably reluctant to work the heavier clay soil in a wet condition. They correctly refuse to roll mud.

At the rate the crop is growing, many acres of stubble cane will be ready to lay-by by the middle of May and by the end of May this cane will be too tall to cultivate.

The cane treated for control of Stunting Disease is certainly making an excellent growth. Stands are very good. Where healthy seed was used the color of the crop is much better and many more suckers are present.

Last fall four new unreleased varieties were transferred to Secondary Increase Stations. C. P. 52-68, the most promising from a sucrose standpoint, is also showing the best stand at all Secondary Stations surveyed this year. Tests conducted thus far on C. P. 52-68 show it to have both yield and sugar. C. P. 52-68 has been increased to the limits of the seed supply. Testing of the variety is being continued. If the variety should prove itself to be good in the test fields, it will be released when enough seed is available.

A new mechanical hoe has been constructed at Oaklawn plantation by Mr. Howard Thibodeaux and coworkers. This hoe makes use of a set of horizontal paddles mounted to float both up and down as well as from side to side. Behind this set of paddles is mounted a set of vertical hoes which operate similarly to the spoke wheel of the Dixie hoe. The spokes on this set of vertical hoes have been flattened to give a

# IN WASHINGTON WITH JOE FERRIS

*by Josiah Ferris*

The Florida 1956-57 sugar crop established new records in sugar content and yield. The last carload of Florida cane passed through the United States Sugar Corporation's mill at Clewiston April 9, 1957. Total production for the state was 125,922 tons of Commercial raw sugar.

United States Sugar Corporation produced 941,841 tons of cane. The average yield of 44½ tons per acre was the highest average yield ever recorded in sugar production in Florida. The cane averaged 11.04 percent, also the highest average yield on record. The company produced 102,319 tons of commercial raw sugar. That production was made in spite of the 13 percent cut in acreage for the 1956-57 crop ordered by the U. S. Department of Agriculture.

United States Sugar Corporation's harvest season opened November 6, 1956 and closed April 9, 1957, a total of 134 days.

Fellsmere Sugar Producers Association at Fellsmere, Florida reported a total production of 7,116 tons, raw basis. The sugar cane at Fellsmere was seriously damaged by a fifteen inch rain in October 1956 which left many fields flooded for days. One month later the cane was further damaged by the earliest freeze in Florida's weather history.

However, despite the extremely adverse weather conditions and a 13 percent restriction in acreage imposed by the U. S. Department of Agriculture on the 1956-57 crop, Fellsmere produced 91,302 tons of sugar cane with an average yield per acre of 19.87 tons. The company made 585,000 gallons of black strap molasses.

The Okeelanta Sugar Refinery, Inc., produced 16,487 tons of commercial raw sugar. Mr. M. L. deQuintana, Vice President and General Manager of the company said the sugar cane yield averaged 40 tons per acre, but on some fields the yield was as high as 83½ tons per acre. Mr. deQuintana gave credit for the immensely high cane yields to a new variety of cane, Clewiston No. 223, which was heavily planted last year. Okeelanta produced 966,000 gallons of black strap molasses.

Officials of the Sugar Division, U. S. Department of Agriculture have promised that the 1957 marketing allotment order will be issued about the time the Bulletin goes to press, May 1, 1957.

---

propellor effect. The tool does a very creditable job of removing grass in plant cane.

# SUGAR CANE IRRIGATION RESEARCH

Progress Report No. 1—Louisiana—1956

*by Herbert E. Butler, Agricultural Experiment Station of the Louisiana State University*

Irrigation in the humid region has been considered supplemental to rainfall in the past. Many times, a few cloud formations have caused irrigators to delay the application of irrigation water in the hopes that rain will come. This has often brought disappointment because (1) it does not rain, or (2) the rain just misses the farm, or (3) the total precipitation is inadequate, or (4) the rain gauge indicated ample precipitation but it fell in such a short period that the majority of the water was removed before the moisture condition in the soil was changed appreciably, except for the top few inches.

Records of total rainfall for a given area are very misleading when used to predict future irrigation needs. During the 25-year period, 1930-1954, there were 144 droughts (periods of 14 days with less than ¼" of rain in 24 hours) recorded at Reserve and 99 of them occurred in or partly in the period of March 1 to October 15. Each drought during this period probably had some influence on the yield for that year. These figures show an average of about four droughts per year, but even this could be misleading. One drought in 1935 lasted 60 days but there were only two droughts during the growing season that year. In 1936, one drought lasted 48 days and there were four others during the season for a total of seven that year. In 1949, there were two droughts with one lasting 30 days and the other 63 days. Another point worth mentioning is that ¼" of rain in 24 hours is used to indicate that a drought has ended, and one such rain every two weeks would indicate that no droughts existed, but actually this rainfall would not be significant. In other words, there were probably periods of greater stress than those reported in the records mentioned. If a record of this area existed which would show periods of low moisture levels in the soil, the number of true droughts would probably be less but the duration much greater, since ¼" of rainfall would not divide one dry period into two separate droughts.

This progress report will discuss the results of the sugar cane irrigation experiment conducted at St. James in cooperation with F. A. Graugnard & Sons Plantation during 1955 and 1956. Practically all expenses in connection with this work were borne by the plantation.

The plots used for this experiment were located on the F. A. Graugnard & Sons Plantation approximately ¼ mile west of the St. James Coop. Sugar Mill. There were three irrigation treatments and the experiment was repeated four times using 12 six-row plots. The rows were 5½′ wide and 750′ long with two to four rows for borders between test plots, giving about 0.567 acre per plot. These same plots are to be used for further research in 1957 and 1958. The work done in 1955 was in a different location on the same farm.

The soil at the experimental plots varied from heavy black land on one side of the field to a heavy mixed land on the other. The fertility in this field was below the average for the farm according to the owners. The land had been graded to facilitate drainage and irrigation. Technical assistance for grading was furnished by the Soil Conservation Service.

The cane used in this experiment was not heat treated and was plant cane of the CP-44-101 variety. The crop received 60 lbs. of nitrogen uniformly. Weeds were controlled over

the entire area by cultivation and by the use of chemicals (2, 4-D & TCA) according to University recommendations.

The three irrigation treatments were as follows: Treatment No. 1 was irrigated to maintain the available moisture level between 50% and 100%. Treatment No. 2 was to be irrigated every second time that Treatment No. 1 was irrigated during each dry period. This resulted in only two irrigations for Treatment No. 2 because of the rainfall pattern, while Treatment No. 1 was irrigated six times. Treatment No. 3 was not irrigated.

Irrigation water for this experiment was pumped from the Mississippi River, transported to the field in drainage ditches, then pumped onto the field using plastic pipe for distribution to the individual furrows.

The rainfall by months was as follows: April—3.36", May—5.21", June 6.28", July 5.99", August 2.76" and September—5.74". Considering that the peak consumptive use rate of sugar cane is about 0.28" per day and assuming that only half of the water falling during the peak consumptive use period ran off, the moisture remaining in the soil represents the following proportions of the amount needed: June 37.4%, July 34.6%, August 15.9% and September 34.27%.

As a result of hurricane "Flossie", there was some lodging but the damage was not serious and was practically uniform throughout the plots.

Average yields of sugar cane are shown in Table 1.

For the net profit, the depreciation and operating costs must be subtracted from the figures in Table 1. These costs will vary from farm to farm depending upon the availability of water, type of labor used, the suitability of the land to irrigation and other factors peculiar to the individual farm.

As was mentioned before, this test site was not on the best soil on the plantation. The average yield of sugar cane on the Graugnard plantation (without irrigation) was 31.40 net converted tons per acre. However, the average yield for plant cane of the variety used in the experiment and on similar soils was 26.02 tons per acre.

The actual total increase in yield shown here is not nearly as significant as the fact that there was an increase at all during a year generally considered favorable for sugar cane production. In general, the moisture condition of the soil was not changed as much as had been hoped for. One of the unirrigated plots did not need additional moisture except at the shallower depths, according to data collected by soil moisture readings and soil sampling.

The potential irrigator must keep in mind that irrigation is not a substitute for other good farming practices such as high fertilization, good drainage and weed control, green manure crops, rotations, etc. Irrigation usually brings disappointment to the inefficient operator or one who has not adequately prepared his land or one who has an inadequate water supply to do a good job.

TABLE 1. Yields of Sugar Cane on Experimental Plots

| Treatment | Total Yield | Number of Irrigations | Increase due to irrigation | |
|---|---|---|---|---|
| | | | Yield* | Gross Profits** |
| 1 | 31.93 | 6 | 4.40 | $37.40 |
| 2 | 29.45 | 2 | 1.92 | 16.30 |
| 3 | 27.53 | 0 | - | - |

* Net converted tons per acre. ** At $8.50 per net converted ton.

# QUOTATIONS ISSUED BY THE LOUISIANA SUGAR EXCHANGE, INC. ON RAW SUGAR, 1956-57 PRICING PERIOD

| Date | N. Y. | Freight | N. O. |
|---|---|---|---|
| Oct. 5 | 6.20 | .08 | 6.12 |
| 6 | No Market | | |
| 7 | Sunday | | |
| 8 | 6.20 | .08 | 6.12 |
| 9 | 6.25 | .08 | 6.17 |
| 10 | 6.25 | .08 | 6.17 |
| 11 | 6.25 | .08 | 6.17 |
| Weekly Average | 6.15 | | |
| Oct. 12 | No Market | | |
| 13 | No Market | | |
| 14 | Sunday | | |
| 15 | 6.25 | .08 | 6.17 |
| 16 | 6.25 | .08 | 6.17 |
| 17 | 6.25 | .08 | 6.17* |
| 18 | 6.25 | .08 | 6.17* |
| Weekly Average | 6.17 | | |
| Oct. 19 | 6.25 | .08 | 6.17 |
| 20 | No Market | | |
| 21 | Sunday | | |
| 22 | 6.25 | .08 | 6.17 |
| 23 | 6.25 | .08 | 6.17 |
| 24 | 6.40 | .08 | 6.27* |
| 25 | 6.50 | .08 | 6.42 |
| Weekly Average | 6.24 | | |
| Oct. 26 | 6.50 | .08 | 6.42 |
| 27 | No Market | | |
| 28 | Sunday | | |
| 29 | 6.50 | .08 | 6.42 |
| 30 | 6.50 | .08 | 6.42 |
| 31 | 6.45 | .08 | 6.37 |
| Nov. 1 | 6.45 | .09 | 6.36 |
| Weekly Average | 6.40 | | |
| Nov. 2 | 6.45 | .09 | 6.36 |
| 3 | No Market | | |
| 4 | Sunday | | |
| 5 | 6.27 | .09 | 6.18 |
| 6 | No Market | | |
| 7 | 6.27 | .09 | 6.18 |
| 8 | 6.27 | .09 | 6.18 |
| Weekly Average | 6.225 | | |
| Nov. 9 | 6.27 | .09 | 6.18 |
| 10 | No Market | | |
| 11 | Sunday | | |
| 12 | No Market | | |
| 13 | 6.27 | .09 | 6.18 |
| 14 | 6.27 | .09 | 6.18 |
| 15 | 6.27 | .09 | 6.18 |
| Weekly Average | 6.18 | | |

| Date | N. Y. | Freight | N. O. |
|---|---|---|---|
| Nov. 16 | 6.27 | .10 | 6.17 |
| 17 | No Market | | |
| 18 | Sunday | | |
| 19 | 6.27 | .10 | 6.17 |
| 20 | 6.27 | .10 | 6.17 |
| 21 | 6.27 | .10 | 6.17 |
| 22 | No Market | | |
| Weekly Average | 6.17 | | |
| Nov. 23 | 6.27 | .10 | 6.17 |
| 24 | No Market | | |
| 25 | Sunday | | |
| 26 | 6.27 | .10 | 6.17 |
| 27 | 6.45 | .09 | 6.36 |
| 28 | 6.45 | .09 | 6.39* |
| 29 | 6.45 | .09 | 6.36 |
| Weekly Average | 6.29 | | |
| Nov. 30 | 6.50 | .08 | 6.40* |
| Dec. 1 | No Market | | |
| 2 | Sunday | | |
| 3 | 6.45 | .08 | 6.37 |
| 4 | 6.45 | .06 | 6.37* |
| 5 | 6.45 | .06 | 6.39 |
| 6 | 6.45 | .06 | 6.39 |
| Weekly Average | 6.38 | | |
| Dec. 7 | 6.45 | .07 | 6.38 |
| 8 | No Market | | |
| 9 | Sunday | | |
| 10 | 6.45 | .07 | 6.36* |
| 11 | 6.41 | .07 | 6.35* |
| 12 | 6.30 | .07 | 6.23 |
| 13 | 6.30 | .06 | 6.24 |
| Weekly Average | 6.31 | | |
| Dec. 14 | 6.30 | .06 | 6.24 |
| 15 | No Market | | |
| 16 | Sunday | | |
| 17 | 6.30 | .06 | 6.24 |
| 18 | 6.30 | .06 | 6.24 |
| 19 | 6.35 | .06 | 6.29 |
| 20 | 6.35 | .06 | 6.30* |
| Weekly Average | 6.26 | | |
| Dec. 21 | 6.35 | .06 | 6.29 |
| 22 | No Market | | |
| 23 | Sunday | | |
| 24 | No Market | | |
| 25 | No Market | | |
| 26 | 6.35 | .07 | 6.28 |
| 27 | 6.35 | .07 | 6.28 |
| Weekly Average | 6.28 | | |

*Local Sale

| Date | N. Y. | Freight | N. O. |
|---|---|---|---|
| Dec. 28 | 6.35 | .07 | 6.28 |
| 29 | No Market | | |
| 30 | Sunday | | |
| 31 | No Market | | |
| Jan. 1 | No Market | | |
| 2 | 6.40 | .08 | 6.32 |
| 3 | 6.40 | .08 | 6.32 |
| Weekly Average 6.31 | | | |
| Jan. 4 | 6.40 | .08 | 6.32 |
| 5 | No Market | | |
| 6 | Sunday | | |
| 7 | 6.40 | .08 | 6.32 |
| 8 | 6.40 | .08 | 6.32 |
| 9 | 6.40 | .08 | 6.35* |
| 10 | 6.45 | .08 | 6.38* |
| Weekly Average 6.34 | | | |
| Jan. 11 | 6.45 | .08 | 6.37 |
| 12 | No Market | | |
| 13 | Sunday | | |
| 14 | 6.48 | .08 | 6.40 |
| 15 | 6.48 | .08 | 6.40 |
| 16 | 6.48 | .08 | 6.40 |
| 17 | 6.35 | .08 | 6.27 |
| Weekly Average 6.37 | | | |
| Jan. 18 | 6.30 | .08 | 6.22 |
| 19 | No Market | | |
| 20 | Sunday | | |
| 21 | 6.30 | .08 | 6.22 |
| 22 | 6.30 | .08 | 6.20* |
| 23 | 6.30 | .08 | 6.22 |
| 24 | 6.30 | .08 | 6.22 |
| Weekly Average 6.22 | | | |
| Jan. 25 | 6.25 | .08 | 6.17 |
| 26 | No Market | | |
| 27 | Sunday | | |
| 28 | 6.25 | .08 | 6.17 |
| 29 | 6.18 | .08 | 6.10 |
| 30 | 6.18 | .07 | 6.11 |
| 31 | 6.15 | .08 | 6.06* |
| Weekly Average 6.12 | | | |
| Feb. 1 | 6.13 | .08 | 6.05 |
| 2 | No Market | | |
| 3 | Sunday | | |
| 4 | 6.10 | .08 | 6.02 |
| 5 | 6.08 | .08 | 6.00 |
| 6 | 6.08 | .08 | 6.00 |
| 7 | 6.08 | .08 | 6.00 |
| Weekly Average 6.01 | | | |

*Local Sale

| Date | N. Y. | Freight | N. O. |
|---|---|---|---|
| Feb. 8 | 6.08 | .08 | 6.00 |
| 9 | No Market | | |
| 10 | Sunday | | |
| 11 | 6.08 | .08 | 6.02* |
| 12 | No Market | | |
| 13 | 6.10 | .08 | 6.02 |
| 14 | 6.10 | .08 | 6.02 |
| Weekly Average 6.015 | | | |
| Feb. 15 | 6.10 | .08 | 6.02 |
| 16 | No Market | | |
| 17 | Sunday | | |
| 18 | 6.10 | .08 | 6.02 |
| 19 | 6.10 | .08 | 6.02 |
| 20 | 6.10 | .08 | 6.02 |
| 21 | 6.10 | .08 | 6.02 |
| Weekly Average 6.02 | | | |
| Feb. 22 | No Market | | |
| 23 | No Market | | |
| 24 | Sunday | | |
| 25 | 6.10 | .08 | 6.02 |
| 26 | 6.12 | .08 | 6.04 |
| 27 | 6.15 | .08 | 6.05* |
| 28 | 6.15 | .09 | 6.06 |
| Weekly Average 6.04 | | | |
| Mch. 1 | 6.10 | .09 | 6.01 |
| 2 | No Market | | |
| 3 | Sunday | | |
| 4 | 6.15 | .09 | 6.10* |
| 5 | 6.15 | .09 | 6.06 |
| 6 | 6.15 | .09 | 6.06 |
| 7 | 6.15 | .09 | 6.17* |
| Weekly Average 6.08 | | | |
| Mch. 8 | 6.16 | .09 | 6.07 |
| 9 | No Market | | |
| 10 | Sunday | | |
| 11 | 6.16 | .09 | 6.07 |
| 12 | 6.20 | .09 | 6.11 |
| 13 | 6.20 | .09 | 6.11 |
| 14 | 6.17 | .09 | 6.08 |
| Weekly Average 6.09 | | | |
| Mch. 15 | 6.17 | .09 | 6.15* |
| 16 | No Market | | |
| 17 | Sunday | | |
| 18 | 6.20 | .09 | 6.11 |
| 19 | 6.20 | .09 | 6.16* |
| 20 | 6.20 | .09 | 6.11 |
| 21 | 6.20 | .09 | 6.15* |
| Weekly Average 6.14 | | | |

| Date | N. Y. | Freight | N.O. |
|---|---|---|---|
| Mch. 22 | 6.20 | .09 | 6.11 |
| 23 | No Market | | |
| 24 | Sunday | | |
| 25 | 6.20 | .09 | 6.15* |
| 26 | 6.20 | .09 | 6.11 |
| 27 | 6.20 | .09 | 6.11 |
| 28 | 6.20 | .09 | 6.11 |
| Weekly Average | 6.12 | | |
| Mch. 29 | 6.20 | .10 | 6.10 |
| 30 | No Market | | |
| 31 | Sunday | | |
| Apr. 1 | 6.20 | .10 | 6.10 |
| 2 | 6.20 | .10 | 6.10 |
| 3 | 6.20 | .09 | 6.15* |
| 4 | 6.20 | .09 | 6.11* |
| Weekly Average | 6.11 | | |
| Apr. 5 | 6.20 | .09 | 6.11 |
| 6 | No Market | | |
| 7 | Sunday | | |
| 8 | 6.20 | .09 | 6.11 |
| 9 | 6.18 | .09 | 6.09 |
| 10 | 6.18 | .09 | 6.09 |
| 11 | 6.20 | .09 | 6.11 |
| Weekly Average | 6.10 | | |

| Date | N. Y. | Freight | N. O. |
|---|---|---|---|
| Apr. 12 | 6.10 | .09 | 6.01 |
| 13 | No Market | | |
| 14 | Sunday | | |
| 15 | 6.10 | .09 | 6.01 |
| 16 | 6.10 | .09 | 6.11* |
| 17 | 6.10 | .10 | 6.00 |
| 18 | 6.10 | .09 | 6.01 |
| Weekly Average | 6.03 | | |
| Apr. 19 | No Market | | |
| 20 | No Market | | |
| 21 | Sunday | | |
| 22 | 6.10 | .09 | 6.01 |
| 23 | 6.10 | .09 | 6.01 |
| 24 | 6.10 | .11 | 5.99 |
| 25 | 6.10 | .11 | 5.99 |
| Weekly Average | 6.00 | | |

SEASON'S AVERAGE PRICE PER POUND 6.1783¢

SEASON'S AVERAGE FREIGHT DIFFERENTIAL PER HUNDRED POUNDS 8.16¢

*Local Sale

## SUGAR MARKET STATISTICS THROUGH APRIL 25, 1957

| | Today | 1 Month Ago | 1 Year Ago |
|---|---|---|---|
| QUOTA RAWS DELIVERED NEW YORK | 6.10 | 6.20 | 6.05 |
| QUOTA RAWS DELIVERED NEW ORLEANS | 5.99 | 6.15 | 6.01 |
| WORLD SPOT RAWS (In Cuba) | 6.67 | 6.19 | 3.39 |

### SUGAR FUTURES No. 6
(Closing Bid Prices)

| | July | Sept. | Nov. |
|---|---|---|---|
| Today | 5.79 | 5.87 | 5.88 |
| 1 Month Ago | 5.81 | 5.84 | 5.88 |
| 1 Year Ago | 5.51 | 5.58 | 5.58 |

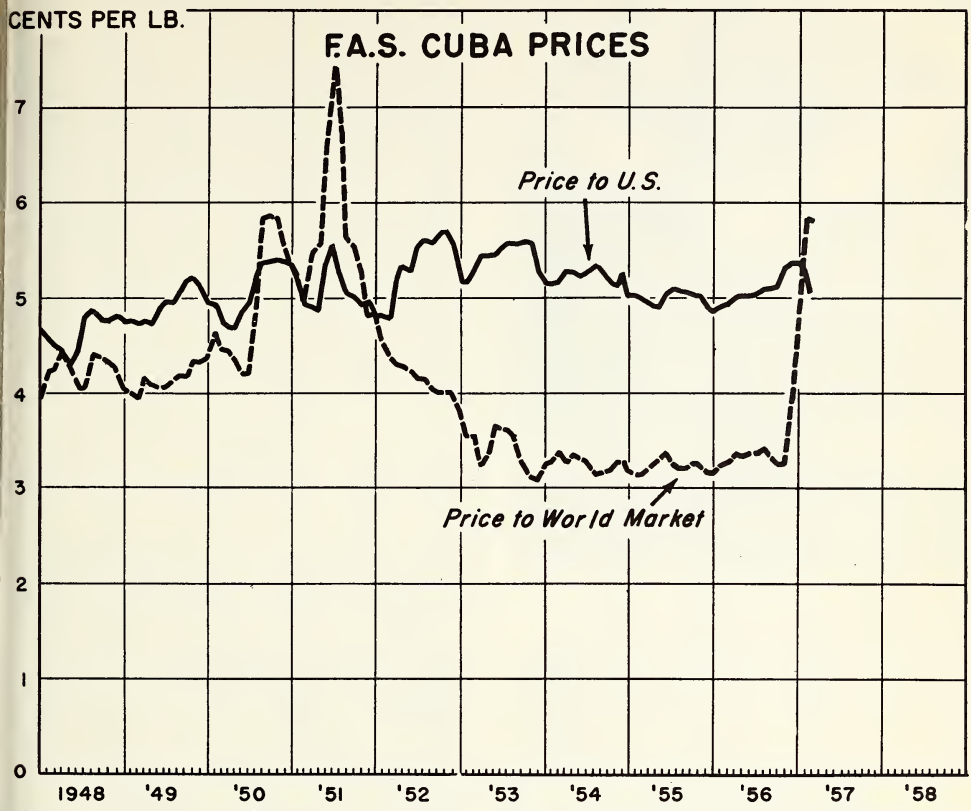
### OFFSHORE RECEIPTS AT NEW ORLEANS
(Long Tons, 2,240 lbs.)

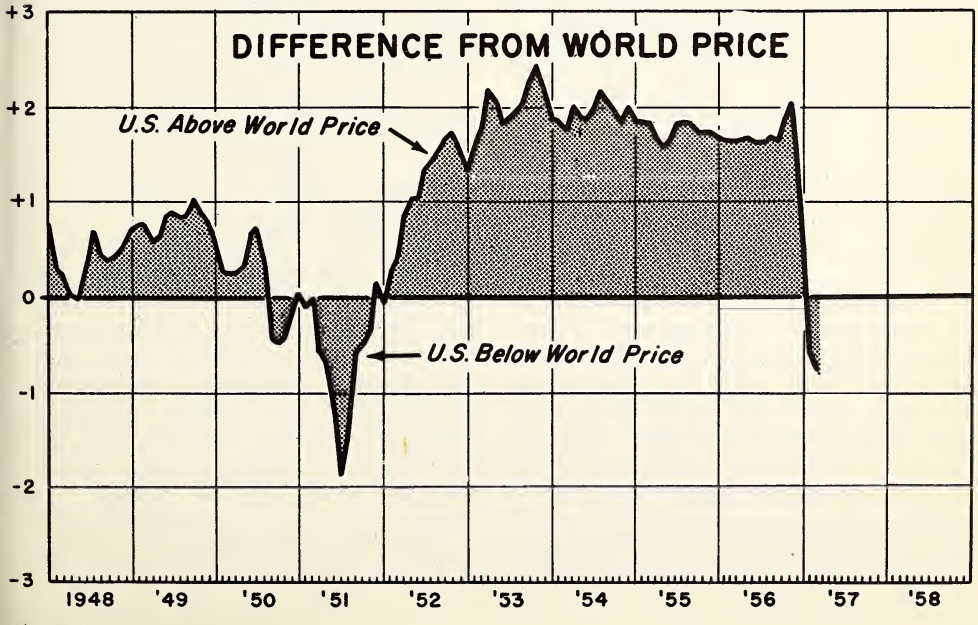
| | To Date 1957 | Same Date 1956 |
|---|---|---|
| American | 113,986 tons | 115,088 tons |
| National (Godchaux) | 63,827 tons | 69,495 tons |
| Colonial | 48,414 tons | 61,680 tons |
| Henderson | 36,906 tons | 38,441 tons |
| Southdown | 10,120 tons | 13,657 tons |
| South Coast | 14,547 tons | 18,998 tons |
| Supreme | 21,069 tons | 36,670 tons |
| Totals | 308,869 tons | 354,029 tons |

* Long Ton (2,240 lbs.)

# RAW SUGAR QUOTA PREMIUMS AND DISCOUNTS

Monthly Comparisons, F.A.S. Cuba Prices of Raw Sugar for Shipment to U.S. and World Markets, 1948 to Date.



# NEED FOR INCREASED APPROPRIATION FOR RESEARCH ON SUGAR CROPS

*(A letter to Dr. Byron T. Shaw, Administrator Agricultural Research, U.S.D.A.)*

The undersigned representatives of the beet and cane sugar industries of the United States urge that appropriations for research on sugar crops in the Department's 1959 budget be increased by $520,000. Of this amount we recommend that $400,000 be allotted to strengthen the research program of the Sugar Crops Section of the Field Crops Research Branch and that this $400,000 be split $250,000 for sugar beet research and $150,000 for sugar cane research. We also urge that an additional $120,000 be added to augment existing research on both sugar beets and sugar cane in the combined fields of nematology, entomology, agricultural engineering, weed control, soil and water relationships and utilization.

The level of U.S.D.A. research in the sugar crops field is lower today than it was 25 years ago. For example, there are today 10 percent fewer full-time employees, including both professional and sub-professional people, working on sugar crop research than in 1933. The level of research on sugar problems reached an all-time low in 1952. A modest increase in appropriations in 1953 permitted a measure of improvement.

The sugar industry has been increasing its research expenditures. The beet sugar industry has added 35 percent in the last four years to the Cooperative Research Funds of the Beet Sugar Development Foundation, from $65,000 to $105,000. Individual beet sugar companies have also increased their grants to State Experiment Stations. Especially have the States increased their soil and water research work significantly. The basic research work of the Department has not kept pace with the industry's needs. This has meant a slowing down of the industry's own research program since following long precedent, the industry's research in several areas relates to the commercial application of the Government's basic research.

Research is the very foundation of the United States sugar industry. Without research in such fields as disease resistance, insect control and variety improvement, the industry would not have survived and cannot survive in the future unless the level of research is maintained at a sufficiently high level for the industry successfully to continue fighting diseases and insects and to increase efficiency by improving yields and reducing labor requirements. Sugar prices are maintained by Government action at a level which, in light of constantly increasing costs, makes mandatory a constant struggle to lower unit costs of production. This can be accomplished only by continued application of basic research findings. Without adequate Government support of this basic research, the industry will rapidly deteriorate.

Additional funds are needed for these purposes: (1) increase studies in the field of genetics, cyto-genetics, plant physiology and diseases; (2) to provide for additional sub-professional help to maximize the effectiveness of present technical help; (3) to augment existing staffs by the addition of younger men who can be trained for replacement of key men who alone are now carrying almost complete responsibility in the field and whose sudden departure from the Government service for any reason would cause a serious break in the present program; and (4) to provide office, laboratory, and greenhouse facilities at Fort Collins, Colorado, and at

Salt Lake City, Utah.

**Sugar beets**

While past research has been very effective in producing varieties resistant to various diseases which have at one time or another threatened to wipe out the beet sugar industry, the need is still great for development of varieties resistant to diseases which have manifested themselves more recently and to new diseases which are a constant threat. Varieties which have combined resistance to both the old and new diseases must be developed. For example, there is now great need for further development of sugar beet varieties which are resistant not only to such old diseases as curly top and leaf spot but also to these diseases in combination with virus yellow. They must also be nematode resistant.

The current shift toward new and improved (higher yielding) hybrid varieties of sugar beets and the recent introduction of monogram beet seed intensifies the need for a stepped-up research program. Indications are that with the new hybrid sugar beet varieties, production per acre can be increased 25 to 30 percent. However, commercial use of these varieties must await further breeding work to breed in resistance to such diseases as curly top, leaf spot, root rot, virus yellows and nematode. The use of monogerm sugar beet seed appears to offer great promise of facilitating the mechanization of Spring work, thereby allowing greatly needed reductions in labor costs and freeing the sugar beet industry from its dependence upon a large supply of migratory laborers to do this work.

Research also is needed on improved soil, water and nutrient relationships and the effect of these relationships on seed germination, plant growth, yields, and sugar content of beets.

In recent years larger processing losses have been incurred in the

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processing of sugar beets; much more research is vitally needed on the factors affecting processing qualities of beets in order to reduce those losses.

### Sugar cane

In the field of sugar cane breeding research, the following are some of the things needed: (1) more basic genetic studies to reduce the hit and-miss characteristics of the present cane breeding program; (2) more research to develop new and better crossing techniques with the aims of making crosses now impossible and increasing the number of viable seed per cross; (3) importation of new breeding materials; and (4) more research to improve the method of variety selections.

Additional research is needed on the Ratoon Stunting Disease of cane. A positive method of identification is needed. There is need to know whether there is more than one strain of the virus which causes the disease. Much research is needed to perfect the currently used method of controlling the disease, and other methods of control should be investigated.

The field of sugar cane cultivation research is relatively unexplored. Many of the present cultivation practices are simply based on custom and are not the result of research. Research on methods and tools is needed.

There is a great opportunity for further investigations on the use of a wide variety of chemicals in weed control, insect control, as defoliants, and as growth-promoting substances.

Moisture is a limiting factor many times in sugar cane yields but the U.S.D.A. has no experiments under way on irrigation. Practically no work has been done in the past on irrigation of sugar cane.

Sugar cane processing and utilization research is not nearly broad enough. For example, a complete qualitative and quantitative analysis of sugar cane juice needs to be completed at the earliest possible date but it will be many years before this can be accomplished with the present level of funds. There is a good basis for the hope that a correlation will be found between a cane variety's juice composition and its processing, agronomic and other charac-


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teristics. When such a correlation is found, it will be of great value to geneticists, agronomists, and pathologists in the breeding and selection of new cane varieties.

The work being done by the U.S. D.A. in cooperation with the Louisiana State University in evaluating the milling and clarification characteristics of new unreleased cane varieties should be continued, but it is our understanding the U. S. D. A. "contract" funds now being used for that purpose cannot be so used after the 1957 crop. Other funds should be made available for the 1958 and subsequent crops.

We believe qualified personnel in the categories listed above are available in sufficient quantity effectively to use the amount of increase in research appropriations in sugar crops requested above. We respectfully urge your favorable action on our request and that these increases be included in the fiscal 1959 budget of the U.S.D.A.

Because of their interest in this subject, we are sending copies of this letter to the following people:

Under Secretary True D. Morse
Assistant Secretary Ervin L. Peterson
Assistant Secretary Ralph S. Roberts
Karl S. Quisenberry
Marion W. Parker
G. E. Hilbert
E. G. McKibben
Martin G. Weiss
Hewitt M. Tysdal
F. P. Cullinan
Cecil H. Wadleigh
Edward F. Knipling
A. L. Taylor
G. J. Haeussler

Very truly yours,
Robert H. Shields, President,
United States Beet Sugar Association
Josiah Ferris, Vice President,
American Sugar Cane League, and Washington Representative of Florida Sugar Producers.


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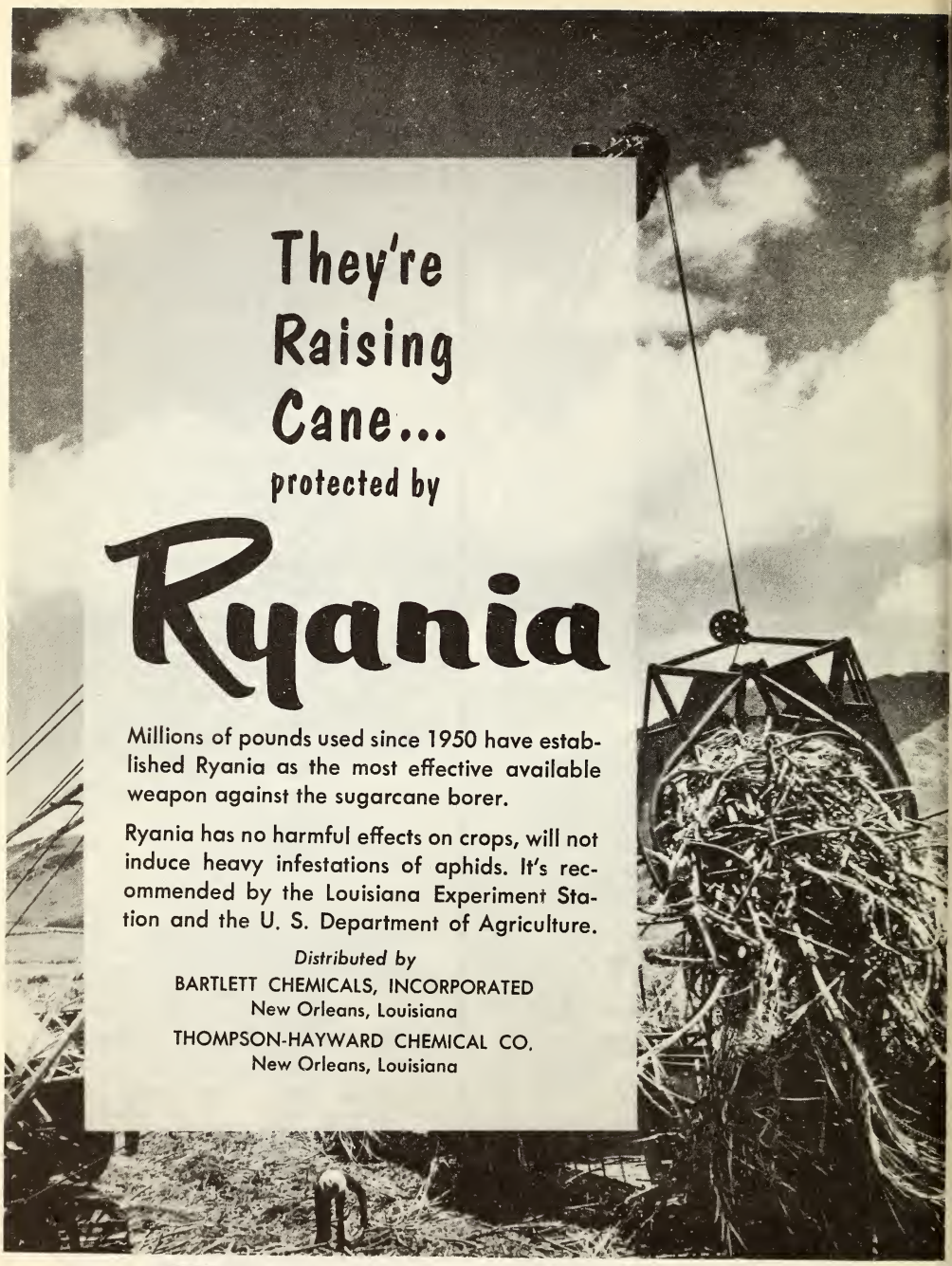
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# THE SUGAR BULLETIN

MAY 29 19

l. 35 — No. 16 MAY 15, 1957

*icial Bulletin of the American Sugar Cane League of the U. S. A*

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in the interests of the Domestic Sugar Cane Industry

THE
# SUGAR BULLETIN

414 Whitney Bldg., New Orleans 12

Gilbert J. Durbin, Editor — Andrew W. Dykers, Managing Editor

Lloyd L. Lauden, Agronomist and Field Representative

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# UP FRONT WITH THE LEAGUE

*by A. W. Dykers*

## Marcel J. Voorhies Dies

Marcel J. Voorhies died April 28, 1957. He will be sorely missed by his many friends in the sugar industry. He had no enemies.

Mr. Voorhies served the Louisiana sugar industry faithfully and capably as Vice President and General Manager of the American Sugar Cane League from 1939 to 1951, a period of many wartime and postwar problems for cane growers and processors and for the League and Mr. Voorhies. His work in behalf of growers and processors during those trying years will long be remembered.

Mr. Voorhies was recognized as an outstanding leader, not only by his own sugar folks but by those in government and in other sugar areas as well. The respect and good reputation the League enjoys are due in large measure to Marcel J. Voorhies.

## Report From Hawaii

Honolulu, Hawaii

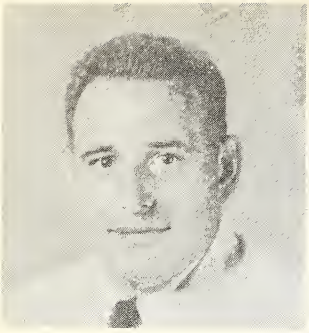
Dear Gilbert,

It's a small world. We hopped on a plane and roared out of New Orleans at a little after 11 in the morning six days ago and in 24 hours we roared into Honolulu after stopping for 6 hours in Los Angeles —which is sorta moving around, at least for an oldtimer like me. At the airport we were met by the four Nelsons — that's my daughter and family—and they immediately popped some beautiful leis around our necks and thus we were welcomed to this beautiful island paradise in the time-honored manner.

I have been having a little trouble getting un-tracked since we got here. The view from up here on the side of the mountain overlooking Pearl Harbor and the Pacific Ocean is so beautiful that all I feel like doing is sitting in an easy chair watching the ships and airplanes moving around. More airplanes fly out of this airport than I have ever seen before (mostly Navy), and I guess they are going to places like Midway and Wake and Guam and those other dots in the big Pacific Ocean that we heard so much about during the last war. Some of these flying machines, of course, are heading back to the Mainland and we will be on one of them before very long, but between now and then I am going to get some first-hand information about this fabulous sugar industry that produces better than ten tons of sugar to the acre and spends $1,750,000 a year on scientific research to find out how to produce more!

The legislature has been in session here for the past few weeks and was to wind up its business last Friday, but didn't. The sugar people here asked for a reduction in taxes —which I see by the paper they did not get—and for this reason Mr. S. L. Platt, secretary of the Hawaiian Sugar Planters' Association asked me to postpone my visit to his office until today. I had the pleasure of meeting him this morning and he has arranged a conducted tour for us later this week to see some field and mill operations. I don't have much to re-

(Continued on page 238)



# IN THE FIELD WITH LLOYD LAUDEN

*by Lloyd L. Lauden*

## Too Much Rain

Sugar cane farmers throughout the belt agree that the 1957 cultivating season has been the most difficult one on record. The entire belt has had too much rain too many times. Sugar farmers also agree that the outlook for a high yielding crop is good because of good stands of cane.

In spite of the fact that some cane on many farms has not yet been worked because of wet conditions, the application of fertilizer on other parts of farms is now progressing at a good rate. It is estimated that about 75% of the crop has been fertilized.

The crop is getting tall. Roots are spreading toward the middle of rows. Some roots will be pruned and some cane will be broken when fertilizing, but the crop must be fertilized. Check color difference between fields already fertilized and fields not fertilized. Color differences are great in spite of more than an adequate amount of moisture.

Soybean planting has been very much delayed. Many farmers have not been able to plant beans. Each time the soil became dry enough for cultivation all available equipment was sent to the cane fields and the bean land was neglected out of necessity.

If a farmer has a piece of land that needs fallow plowing because of a Johnson grass infestation and needs an excuse or a reason for not planting beans or corn, this season has certainly offered it. Fallow plowing has played a large part in the overall Johnson grass control program. Corn, when planted in Johnson grass infested land, has in the opinion of many prevented a more rapid control of the pest.

The writer has seen many good stands of cane throughout the belt this year. Good stands are general this year but, when an excellent or perfect stand of cane is found on all parts of one farm questions are always in order. The answer given by those having excellent or perfect stands is always the same. Cane planting is the most important operation on the farm; therefore, only good cane is used which has been properly topped for seed. A good job is aimed for rather than a speedy job and two good sound stalks are planted using a good lap.

Both the L.S.U. and the U.S.D.A. Houma Experiment Stations have all their sugar cane seedlings planted out to the fields now. Both stations have had about the same difficulty as the industry, too much rain. Each year about 70,000 sugar cane seedlings are grown at the two stations. Sugar cane seedlings are plants grown from true sugar cane seed and each single seedling is a separate and distinct variety. The big job is to find the one to several good varieties in the seedling plots.

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# IN WASHINGTON WITH JOE FERRIS

*by Josiah Ferris*

## 1957 Mainland Cane Marketing Allotments Proposed

A proposed order to establish marketing allotments for mainland cane processors of the 1957 quota has been issued by the United States Department of Agriculture.

The proposed order would replace preliminary allotments to processors announced on December 31, 1956. The order would base allotments on the record of the hearing held in New Orleans, Louisiana, on March 15, 1957.

Under the proposed order the marketing allotments to processors would be established by measuring and weighting the three factors specified for consideration in Section 205(a) of the Sugar Act of 1948 as follows: (1) processings from proportionate shares, as measured by each processor's production from 1956-crop cane, would be weighted 60 percent; (2) past marketings, as measured by each processor's 1952-56 annual average marketings within allotments, would be weighted 20 percent; and (3) ability to market, as measured by the sum of (a) each processor's January 1, 1957, effective inventory and (b) his share of the difference between the 1957 quota and the total January 1, 1957, effective inventory of all processors, would be weighted 20 percent.

The proposed order would limit allotments to 90 percent of the quota until final data with respect to 1956-crop production, 1956 marketings, and January 1, 1957, inventories are available and an amended order based on such data is issued.

Interested persons were given an opportunity to file written exceptions to the proposed order with the Hearing Clerk of the United States Department of Agriculture, Washington 25, D. C. The time for filing such exception expired on May 13, 1957. The Department of Agriculture expects to issue the final order making full quotas available to processors about the third week in May.

The Annual Meetings of The Sugar Association, Inc., Sugar Research Foundation, Inc., and Sugar Information, Inc., and the Joint Annual Meeting of the Boards of Directors of the three associations were held in Chicago, Illinois, May 2, 1957. Wallace C. Kemper, Will J. Gibbons Jr., and Josiah Ferris were reelected to the Boards of Directors. Wallace C. Kemper was reelected Vice President of the Sugar Association, Inc.

Fred Davidson, for many years Treasurer of the three corporations, tendered his resignation which was accepted with regret by the entire membership. Gunnar Fromen, who has creditably served as Secretary for a number of years was elected Treasurer, and Slator M. Miller was elected Secretary. All other officers were reelected.

More than a hundred members and representatives of sugar companies participated in the meeting at the Blackstone Hotel and heard Leo Burnett, President of the Leo Burnett Advertising and Public Relations Agency, unveil plans for next

(Continued on page 238)

# EFFECT OF SEED-PIECE SIZE AND RATE OF PLANTING ON YIELDS OF SUGARCANE, AND OF NITROGEN FERTILIZATION ON YIELD OF SEED CANE IN LOUISIANA

INTERNATIONAL SOCIETY OF SUGARCANE TECHNOLOGISTS
NINTH CONGRESS INDIA—JANUARY 1956

*Leo P. Hebert, Field Crops Research Branch, Agricultural Research Service, United States Department of Agriculture.*

In Louisiana it is common practice to use as much as 20 percent of the sugarcane crop for seed cane annually. Unlike many cane-producing countries of the world where discarded portions of stalks, tops, or short seed pieces are satisfactory for planting material, the sugarcane growers in this State plant whole stalks. The amount of whacking or segmenting of the stalks after placement varies with the individual plantation. Use of whole stalks for planting material and the heavy rate of planting found from experience over a period of many years to be necessary in order to obtain a stand of cane, have resulted in costly seed cane requirements. In former years growers chose seed cane from either old stubble fields or the less productive areas in order to minimize the use of millable cane for planting purposes, but within recent years they have become increasingly conscious of the importance of the quality of seed cane.

The occurrence of numerous gaps or breaks in the stands of cane in commercial fields points to the importance of planting sound seed-cane in order to insure a uniform stand which is essential if maximum production is to be realized at minimum cost. It is not uncommon to see fields overrun with weeds because a high percentage of the linear row footage consists of blank spaces or gaps due to poor-quality seed-cane. This heavy weed infestation with the accompanying increase in cost of cultivating and harvesting the crop, and the far more important factor of reduced yield, emphasize the importance of obtaining good stands of cane. Therefore, there is need for field studies of the effect of cultural treatments of seed plots on quantity and quality of seed-cane produced, the rate of planting, and size of seed piece, as related to yields obtained with some of the important varieties now in commercial production.

In previous studies (2) it was found that the amount of seed-cane required to plant one acre under Louisiana conditions ranged from 2.45 tons with small-barrel varieties like C.P. 36/105 to 4.70 tons with large-barrel varieties like C.P. 44/155 when planting "two running stalks and lap", which is the customary procedure on most plantations. Heavier rates of planting require relatively more seed-cane, depending on the number of stalks placed per linear row footage.

With varieties in commercial culture in Louisiana during the period 1933 to 1936, Arceneaux (1) found that seed pieces of 5 "eyes" or buds gave maximum yields of cane and sugar per acre, but that shorter pieces gave a higher percentage of germination. He concluded that some practices which stimulated germination actually resulted in lower yields of cane.

The present study was started in 1949 with C.P. 36/13, C.P. 36/105 and C.P. 44/101. In 1951, C.P. 36/13 was replaced with C.P. 44/155. Cane yields and stand counts obtained with C.P. 36/105 and C.P. 44/101, the only 2 varieties that extend over the four-year period, are included in this report. Since these 2 varieties occupy over 65 percent of the Louisiana sugarcane acreage at the present time, it is believed that the information obtained from

this study should be of much value to the Louisiana growers by helping them to make the most effective use of their seed cane.

## Experimental Technique

A 2x3x2 split-plot design experiment was used with 2 seed-piece sizes, 3 rates of planting, and with seed taken from plots fertilized with two levels of nitrogen superimposed on each of 3 varieties, with the variety treatment as the main block. Each sub-plot measured 18 feet by 20 feet or approximately 1/120-acre in size, and conversion factors for calculating yields of cane and number of shoots per acre as given in tables 2, 3, and 4, were carried to three decimal places. The experimental plots were cultivated alike and uniformly fertilized with 40 pounds of nitrogen in plant cane, and with 60 pounds in first stubble. Two replications of each variety, or main block, were used each year over a period of 4 years so that there were 4 plant cane crops and 4 first-stubble crops, or a total of 8 crops. The tests were planted on August 1 each year on light soil of the Mhoon silt loam type.

Seed pieces were cut into segments of 3 and 5 "eyes" or lateral buds at planting time, each eye being carefully inspected so as to eliminate as nearly as possible all damaged ones. In order to avoid bias and to minimize any possible effect of polarity on germination the starting point was alternated for each stalk. For example, in the case of 2 stalks each 11 joints in length, 3 3-eye pieces were taken from the lower part of one, discarding the 2 uppermost joints, while 3 3-eye pieces were taken from the upper part of other, discarding the 2 lowermost joints. The same procedure was followed in preparing the 5-eye seed pieces.

Seed plots for the experiments were fertilized at the usual time in April with ammonium sulfate for the first 3 years and with anhydrous ammonia the last year. Two levels of nitrogen were used on the seed plots, the normal plantation rate of 60 pounds per acre and a heavy nitrogen rate of 300 pounds per acre. Seed cane was taken from either first stubble or summer plant cane grown on light soil. In order to arrive at an estimate of the quantity of available seed cane in the plots, several representative sections of row 60 feet in length were selected at random and all the stalks suitable for planting were counted and that number converted to number of stalks per acre. The number of joints or internodes on approximately 200 stalks were counted for each variety on August 1 and again on October 1. The number of eyes or lateral buds per acre, which in effect is the amount of planting material, was then determined from the number of stalks per acre and the number of eyes per stalk.

Three rates of planting were tested. R3, the highest rate with approximately 36,000 eyes per acre, compares with standard Louisiana field practice of planting "two running stalks and a lap", in which case the varieties C.P. 36/105 and C.P. 44/101 will average approximately 35,000 to 38,000 eyes per acre, respectively (2). R2, with 30,000 eyes per acre, is equivalent to 2 continuous lines of cane with no overlapping, and R1, with 24,000 eyes, is equal to one and one-half continuous lines of cane on the row.

## Results

Table 1 gives the approximate quantity of available seed per acre on August 1 and on October 1 for the normal nitrogen and the heavy nitrogen plots for 4 varieties. The heavy rates of nitrogen increased the number of stalks per acre and the number of eyes per stalk for all varieties on both dates. On August 1 this increase ranged from approximately 10 percent with C.P. 44/101 to approximately 41 percent with C.P. 36/13. The quantity of seed cane on October 1 was correspondingly increased by heavy nitrogen applications. C.P. 44/101,

with approximately 10 percent increase, showed the least response to the heavy nitrogen treatment, and C.P. 36/13, with 41 percent increase, showed the greatest. C.P. 36/105 and C.P. 44/155 responded relatively well to the high rate of nitrogen.

The increase in planting material was due both to a greater number of stalks per acre and to more "eyes" or lateral buds per stalk in the high nitrogen plots. With only one exception, C.P. 36/105 in 1951, the heavy nitrogen treatment resulted in more stalks per acre and in more eyes per stalk.

Tables 3 and 4 summarize the average annual yields of cane per acre of all treatments with C.P. 36/105 and C.P. 44/101, and for the average of both varieties for 8 crops. The 5-eye seed pieces resulted in higher yields than the 3-eye seed pieces in all but one treatment, in which case, however, the difference was not significant. This was with C.P. 44/101 at the low rate of planting in the normal or low rate of nitrogen treatment. In the average of all tests the 5-eye seed pieces increased the yield over the 3-eye seed pieces by 1.4 tons of cane per acre, a significant value at the 1 percent level of probability. The analysis of variance shows that the mean squares for rate of planting and for size of seed piece are highly significant, and that the nitrogen level and all interactions are not significant at the 5 percent level. The heaviest rate of planting produced significantly higher yields than the lower rates; differences between the 2 lower rates were not significant. The 2 varieties behaved very much alike in the respect as shown by the insignificant mean square for variety x rate interaction. The highest rate is comparable with the usual field practice of planting "two running stalks and a lap" or approximately 36,000 eyes per acre. Yield differences due to the 2 rates of nitrogen on the seed plots the previous year were not statistically significant but the quality of the seed cane produced was improved as evidenced by the stimulation in germination.

Table 2 gives the average number of shoots and percent germination for 2 varieties in each treatment during the period 1949 to 1953, inclusive. Each test was planted on or about August 1, and stand counts made on September 1, or approximately 30 days after planting. It will be seen that at comparable rates of planting segmenting the stalks into 3-eye seed pieces increased the germination, and that the heavy rate of nitrogen of seed plots also stimulated germination. There was also a large difference in germination between the varieties, With C.P. 44/101 emerging much more rapidly than C.P. 36/105.

## Discussion of Results

Results of these experiments with 2 of the most widely grown commercial varieties agree with those obtained by Arceneaux (1) when he conducted tests to determine optimum length of seed piece with varieties which were in cultivation in Louisiana 2 decades ago. He found that cane yields from plots planted with seed pieces less than 5 eyes in length were significantly lower than from those planted with seed pieces of 5 eyes, and that yields of cane from plots planted with whole stalks were lower than from those planted with segmented stalks. In the present study with C.P. 36/105 and C.P. 44/101, yields from 5-eye seed pieces were higher than from whole stalks. (Data not shown.)

The average annual increase in yields from the 5-eye seed pieces over the 3-eye length ranged from 0.7 ton with C.P. 44/101 at the low rate of planting to 2.1 tons with C.P. 36/105 at the heavy rate of planting, with an overall increase of 1.4 tons in the average of the 2 varieties in this study. The increase resulting from any one planting would be 2 to 3 times the above

values since 2 to 3 crops are harvested from each planting. From a practical standpoint, then, whole stalks should be segmented if the resulting pieces consist of at least 5 eyes each but should not be whacked if too many 3-eye pieces result from the cutting. Cane planted in early August is usually short and whacking is probably not beneficial, and may be damaging, if the stalks are less than 9 or 10 joints in length. Cane planted in the fall should be cut into pieces, but care should be taken to avoid having the pieces less than 5 joints long.

As noted by Arceneaux (1) and in agreement with our observations, an increase in germination is not always followed by an increase in cane yields. Some treatment which have caused an increase in germination have actually resulted in decreased yields. This probably results from other conditions affecting the seed piece during or immediately following the period of over-wintering which is often severe in Louisiana. It is of interest to note that the single exception to obtaining higher yields of cane per acre from the longer seed pieces was the only treatment in which the percent of germination was higher with the longer seed pieces.

The extra 0.5 to 1 ton of cane required to plant at the heavy rate of "two running stalks and a lap", or approximately 36,000 eyes per acre, appears to be justified by the statistically significant 1.5 ton per acre per crop increase in yield of cane over the 2-stalk rate, and the 2-ton per crop increase over the 1½-stalk rate, in addition to the better control of weeds where there is more cane on the row. This latter advantage has become increasingly important under our present system of mechanized cultivation and in the herbicidal control of weed pests. All seed pieces in these trials were carefully placed to avoid breaks in the continuity of the line or lines of cane, but this is not always the case in commercial fields where breaks or gaps often occur in the lines of cane when planting at even heavier rates than 2 continuous stalks. More attention should be given to seed cane placement in commercial fields.

With the present emphasis on growing seed cane for the control of diseases the increase in quantity of planting material from heavy nitrogen application is of special interest. The $20.00 to $25.00 additional cost for heavy fertilization of the seed plots is justified by the 10 to 41 percent, or 2 to 8-ton, increase in amount of seed cane produced, especially when the seed plot consists of heat-treated or disease-free seed cane.

Another consideration is the smaller acreage necessary to produce the seed cane requirements and the release of more land for the production of mill cane under our present acreage control programme. The quality of the cane for milling purposes was not determined and the effect of heavy nitrogen application on sucrose and purity is not known. However, the recommendation for heavy rates of nitrogen applies only to fields intended for planting purposes where any possible depression in sucrose and purity level would not be important.

## Summary

Heavy rates of planting found to be necessary under Louisiana conditions and the common occurrence of blank spaces, or gaps, in sugarcane stands point to the importance of giving special attention to the production and preparation of cane for planting as well as to the quantity of seed cane required for maximum yields per acre. Results of an experiment to study the problem are presented.

Two seed plots of the varieties to be tested were fertilized at the rate of 60 and 300 pounds of nitrogen per acre, respectively, and the seed cane produced was segmented into 3-eye lengths and 5-eye lengths prior to planting. Three rates of planting

(Continued on page 238)

TABLE 1

SUMMARY OF SEED CANE PRODUCED IN SUGARCANE PLOTS 6 FEET x 60 FEET FERTILIZED AT 2 LEVELS OF NITROGEN DURING THE PERIOD 1949-52, INCLUSIVE. FERTILIZER APPLIED IN APRIL OF EACH YEAR AND COUNTS MADE ON AUGUST 1 AND OCTOBER 1 OF EACH YEAR.

| Variety and Year | | NORMAL NITROGEN FERTILIZATION (60 pounds per acre) | | | HEAVY NITROGEN FERTILIZATION (300 pounds per acre) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Average number of stalks per acre | Average number of joints per stalk | | Average number of stalks per acre | Average number of joints per stalk | | Increase of available seed cane per acre over normal nitrogen | |
| | | | Aug. 1 | Oct. 1 | | Aug. 1 | Oct. 1 | August 1 | October 1 |
| | | | | | | | | percent | percent |
| C.P.36/105 | 1949 | 22606 | 7.13 | 13.51 | 26808 | 7.83 | 14·70 | 30.1 | 29.0 |
| | 1950 | 31808 | 6.85 | 12.05 | 40338 | 7·92 | 13·78 | 46.6 | 45.0 |
| | 1951 | 33251 | 7.82 | 14.53 | 32960 | 8.54 | 14·40 | 8.2 | -1.8[1] |
| | 1952 | 25918 | 8.07 | 13 37 | 30274 | 8.29 | 14·42 | 20.0 | 26.0 |
| Average | ... | 28396 | 7.47 | 13.36 | 32595 | 8.14 | 14·32 | 25.1 | 23.0 |
| C.P. 44-101 | 1949 | 37861 | 6·43 | 12.·27 | 41273 | 6.55 | 12·56 | 11.0 | 11.6 |
| | 1950 | 38796 | 5·68 | 11.02 | 39068 | 6.78 | 12·89 | 20.2 | 17.8 |
| | 1551 | 36227 | 6.62 | 12.00 | 36518 | 6.97 | 12·49 | 6.1 | 4.9 |
| | 1952 | 30347 | 6.07 | 11.47 | 30492 | 6.18 | 12·39 | 2.3 | 8.5 |
| Average | ... | 35808 | 6·20 | 11.69 | 36838 | 6.62 | 12·58 | 9.8 | 10.7 |
| C.P.36/13 | 1949 | 30183 | 6.78 | 11.03 | 34503 | 7.07 | 12·94 | 19.2 | 34.1 |
| | 1950 | 23413 | 4.29 | 10.83 | 29085 | 6.07 | 12·37 | 75.8 | 41.9 |
| Average | ... | 26798 | 5·53 | 10.93 | 31794 | 6.57 | 12·65 | 41.0 | 37.3 |
| C.P. 44/155 | 1951 | 27098 | 6·79 | 11.81 | 30601 | 7.20 | 12·81 | 19.7 | 22·5 |
| | 1952 | 26717 | 5·25 | 10.69 | 30347 | 5.57 | 12·18 | 20.5 | 29·4 |
| Average | ... | 26907 | 6·02 | 11.25 | 30474 | 6.38 | 12·49 | 20.0 | 25·7 |

1. Slight decrease in quantity of available seed cane.

TABLE 2

SHOOT COUNT AND PERCENT GERMINATION IN SEED PRE-TREATMENT X SIZE X RATE OF PLANTING EXPERIMENT. AVERAGE OF 4 PLANT CANE CROPS PLANTED ON AUGUST 1, AND COUNTED ON SEPTEMBER 1 OF EACH YEAR DURING THE PERIOD 1949 TO 1952, INCLUSIVE.
(PLOTS 18 FEET X 20 FEET)

| | HEAVY NITROGEN FERTILIZATION OF SEED PLOT | | | | | | NORMAL NITROGEN FERTILIZATION OF SEED PLOT | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3-eye seed pieces | | | 5-eye seed pieces | | | 3-eye seed pieces | | | 5-eye seed pieces | | |
| | $R_1$* | $R_2$* | $R_3$* | $R_1$ | $R_2$ | $R_3$ | $R_1$ | $R_2$ | $R_3$ | $R_1$ | $R_2$ | $R_3$ |
| **C. P. 36/105** | | | | | | | | | | | | |
| Shoot count** ... | 223 | 250 | 329 | 165 | 222 | 265 | 168 | 236 | 352 | 157 | 204 | 238 |
| Percent germ*** ... | 20.6 | 18·9 | 21.1 | 15.3 | 16.8 | 17.0 | 15.6 | 17.9 | 22.6 | 14.5 | 15.5 | 15.3 |
| **C. P. 44/101** | | | | | | | | | | | | |
| Shoot count ... | 364 | 364 | 528 | 313 | 397 | 497 | 332 | 432 | 481 | 307 | 401 | 485 |
| Percent germ. ... | 33.7 | 27.6 | 33.8 | 29.0 | 30.1 | 31.9 | 30.7 | 32.7 | 30.8 | 28.4 | 30.4 | 31.1 |
| **Average of 2 varieties** | | | | | | | | | | | | |
| Shoot count* ... | 293 | 307 | 428 | 239 | 309 | 381 | 250 | 334 | 416 | 232 | 302 | 361 |
| Percent germ. ... | 27.2 | 23.2 | 27.4 | 22.1 | 23.4 | 24.4 | 23.1 | 25.3 | 26.7 | 21.4 | 22.9 | 23.2 |

*Rate 1 = 1 running stalk with very little lap = 24,000 eyes per acre
Rate 2 = 1½ „ „ „ „ „ = 30,000 „ „ „
Rate 3 = 2 „ „ „ „ „ = 36,000 „ „ „

**Average number of shoots per plot.

***Weighted value based on total number of eyes planted.

TABLE 3

AVERAGE YIELD OF CANE IN TONS PER ACRE FOR 2 VARIETIES PLANTED AT 3 RATES WITH 2 SIZES OF SEED PIECES FROM SEED PLOTS FERTILIZED WITH 2 LEVELS OF NITROGEN. AVERAGE OF 4 PLANT CANE AND 4 FIRST-STUBBLE CROPS DURING THE PERIOD 1950-54, INCLUSIVE
(PLOTS 18 FEET X 20 FEET)

| Rate of Planting | C. P. 36/105 | | | | C. P. 44/101 | | | | Average of 2 varieties | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Pounds of Nitrogen per acre applied on seed plots | | | | Pounds of Nitrogen per acre applied on seed plots | | | | Pounds of Nitrogen per acre applied on seed plots | | | |
| | 60 | | 300 | | 60 | | 300 | | 60 | | 300 | |
| | 3* | 5* | 3 | 5 | 3 | 5 | 3 | 5 | 3 | 5 | 3 | 5 |
| $R_1$** ... | 26.6 | 27.1 | 24.3 | 26.7 | 35.3 | 34.9 | 33.8 | 35.7 | 30.9 | 31.0 | 29.1 | 31.2 |
| $R_2$** ... | 25.2 | 26.7 | 26.3 | 27.4 | 34.9 | 36.7 | 35.6 | 35.7 | 30.1 | 31.7 | 31.0 | 31.5 |
| $R_3$** ... | 27.4 | 28.2 | 26.6 | 30.0 | 36.0 | 37.9 | 36.3 | 38.0 | 31.7 | 33.1 | 31.5 | 34.0 |
| Average of 3 rates ... | 26.4 | 27.3 | 25.7 | 28.0 | 35.4 | 36.5 | 35.2 | 36.5 | 30.9 | 31.9 | 30.5 | 32.2 |
| Difference for P. = .05 ... | 2.64 | 2.64 | 2.64 | 2.64 | 2.64 | 2.64 | 2.64 | 2.64 | 1.87 | 1.87 | 1.87 | 1.87 |
| „ for P. = .01 ... | 3.47 | 3.47 | 3.47 | 3.47 | 3.47 | 3.47 | 3.47 | 3.47 | 2.46 | 2.46 | 2.46 | 2.46 |

*Seed Pieces of 3 eyes and 5 eyes.
**Rate 1 = 24,000 eyes per acre.
Rate 2 = 30,000 „ „ „
Rate 3 = 36,000 „ „ „

TABLE 4

AVERAGE YIELD OF CANE IN TONS PER ACRE FOR 2 VARIETIES PLANTED AT 3 RATES WITH TWO SIZES OF SEED PIECES. AVERAGE OF 4 RLANT CANE AND 4 FIRST STUBBLE CROPS ON PLOTS 18 FEET x 20 FEET DURING THE PERIOD 1950-1954, INCLUSIVE.

| Rate of Planting | C. P. 36/105 | | | C. P. 44/101 | | | Average of 2 varieties | | |
|---|---|---|---|---|---|---|---|---|---|
| | 3 eyes | 5 eyes | Variety average | 3 eyes | 5 eves | Variety average | 3 eyes | 5 eyes | Variety average |
| $R_1$ ... | 25.5 | 26.9 | 26.2 | 34.6 | 35.3 | 34.9 | 30.0 | 31.1 | 30.5 |
| $R_2$ ... | 25.8 | 27.1 | 26 4 | 35.3 | 36.2 | 35.7 | 30.5 | 31.6 | 31.0 |
| $R_3$ ... | 27.0 | 29.1 | 28.0 | 36.1 | 38.0 | 37.0 | 31.6 | 33.5 | 32.5 |
| Average of 3 rates* ... | 26.1 | 27.7 | 26.9 | 35.3 | 36.5 | 35.9 | 30.7 | 32.1 | 31.4 |
| Diff. for P.=.05 ... | 1.87 | 1.87 | 1.32 | 1.87 | 1.87 | 1.32 | 1.32 | 1.32 | .93 |
| Diff. for P.=.01 ... | 2.46 | 2.46 | 1.74 | 2.46 | 2.46 | 1.74 | 1.74 | 1.74 | 1.23 |

*Diff. for significance between averages of 2 varieties when P. =.05—.76 ; P.=.01—1.00

## SEED

(Continued from page 233)

were used: Rate 1 with approximately 24,000 eyes per acre; rate 2 with 30,000 eyes; and rate 3 with 36,000 eyes per acre. Rate 3 is comparable with the commercial practice. All experiments were planted on light soil on or about August 1 of each year.

Plots receiving 300 pounds of nitrogen produced 10 to 41 percent more seed cane than those fertilized with 60 pounds. There was a difference in varietal response to nitrogen. This response was measured on August 1, when seed cane was taken for summer planting, and on October 1.

Yields of cane per acre were significantly higher in plots planted with 5-eye seed pieces than in those planted with 3-eye seed pieces, although the opposite was true in percent of germination in the fall. The heavy rate of planting yielded significantly more cane per acre than the 2 lower rates. The increase in yields, together with the more effective control of weeds resulting from a continuous stand of cane, justifies the heavy rate of planting.

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1. Arceneaux, C. 1948. Some practical means of improving stands of sugarcane under Louisiana conditions. **Sug. Bull.** 26 (24): 404, 411-413.
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Naya Hindustan Press, Delhi.

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## UP FRONT

(Continued from page 227)

port right now except that we have driven around the island and have seen sugar cane growing as thick as a jungle with acres and acres of pineapples mixed in among the cane fields.

The cane grows 22 to 24 months before harvesting and the pineapples take 18 to 20 months to ripen. From this it will be seen that it takes a little time to produce a crop out here, but these folks plant more or less all year long and this supplies ripe cane for the mills around the calendar, also.

In this irrigated land on Oahu cane is planted in the furrows and it seems rather peculiar to see the young shoots coming up in what looks like the wrong place. The idea, however, is to have the water flow between the rows. Incidentally, fertilizer is added to the irrigation water and food and drink is served the plants in one operation!

There are approximately 219,000 acres devoted to sugar cane in Hawaii. This is only about 18 square miles and is less than 5½ per cent of Hawaii's land area. These 18 square miles produce 1,000,000 tons of sugar annually. The Hawaiian Sugar Planters' Association says that cropping has continued in some cases for more than a century, yet the Hawaiian cane lands are actually more fertile today than before culture began.

And now comes the atomic age in sugar cane culture. These scientific farmers mix uranium or something in the irrigation water and go around the fields with Geiger counters finding out how high the water is in the cane stalk. Using this method, they not only know when the canes crave a drink, but they also conserve a lot of water by not over-irrigating. Smart people, these Hawaiians!

Aloha.

Andrew

———o———

## IN WASHINGTON

(Continued from page 229)

year's advertising campaign.

Your Washington representative appeared before a sub-committee of the Senate committee on Interstate and Foreign Commerce on May 13, 1957, on behalf of Senate Bill No. 86, known as the—"Cloud Modification Research Bill." The testimony pointed out that the American Sugar Cane League and the Louisiana sugar cane farmers and processors

are naturally and vitally interested in properly directed research that might eventually lead to a practical method of obtaining additional rainfall when needed.


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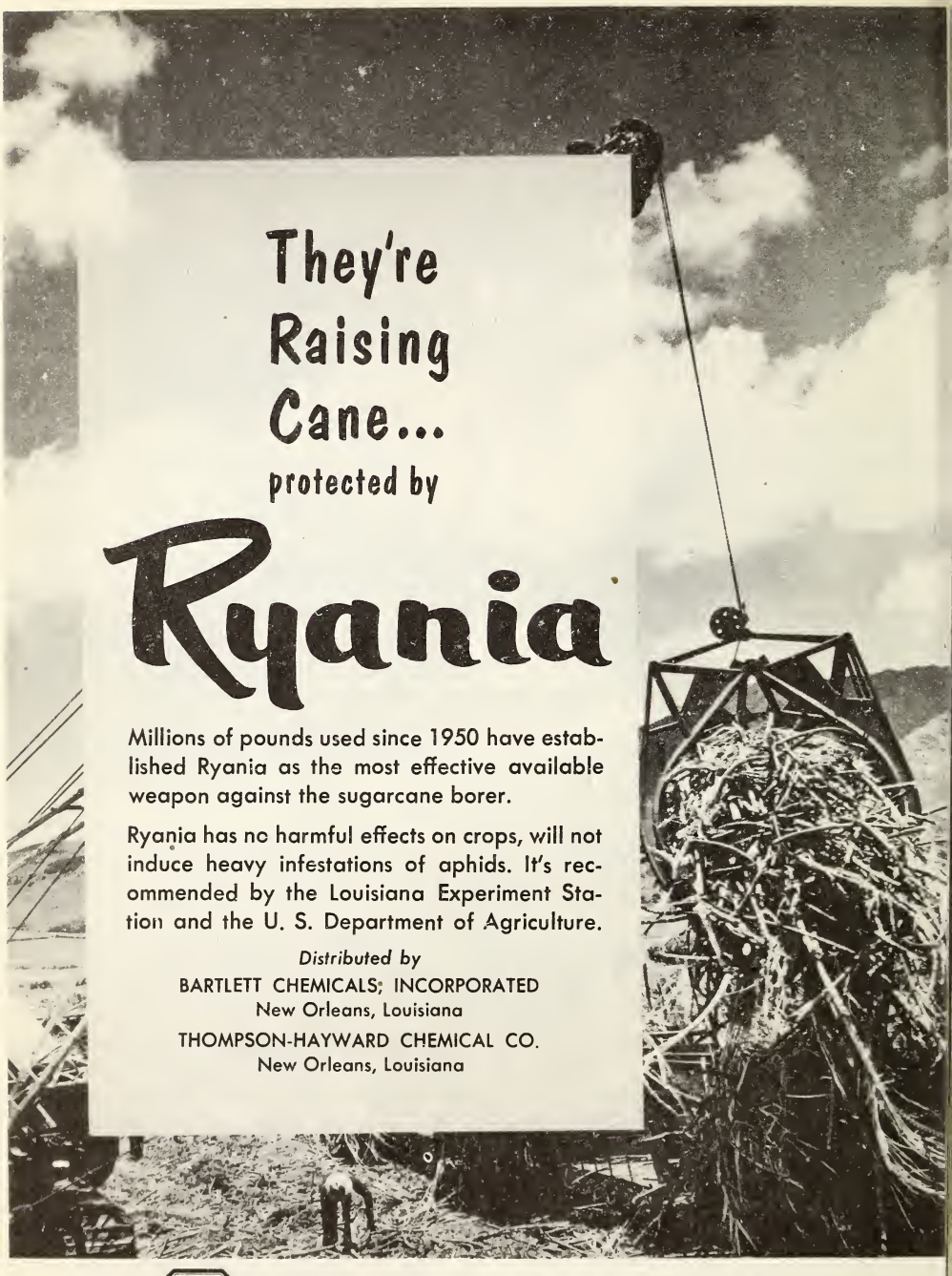

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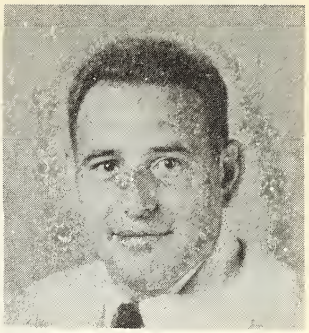
# IN THE FIELD WITH LLOYD LAUDEN

*by Lloyd L. Lauden*



## Contact Committee Meeting June 20th

The Annual U.S.D.A. Houma Contact Committee meeting will be held on Thursday, June 20, 1957. The meeting will begin at 9:30 A.M. in the administration building of the Station.

The researchers of the Station will discuss all the experiments conducted since the last annual meeting as well as the work planned for the future. In addition to a discussion of the research conducted, specific recommendations on many phases of growing cane will be given.

Come out to hear and learn from the men who spend all of their time toward improving the crop you grow. The crop will have already been laid-by by June 20 and farmers all over the belt should have time or should take time to attend this meeting. Make these men know that the Louisiana sugar industry appreciates the work they are doing. Plan now to attend.

You will hear the latest information on fertilization, varieties, insect control, and machinery experiments.

Dr. Robert Coleman, Plant Physiologist at the Houma Station, will have interesting information to present about a new chemical called Gibberellic acid. A very small amount of this chemical sprayed on some plants causes rapid growth. This chemical has been used experimentally on other crops and in some cases has given amazing results. An experiment was started this year using the material on cane and Dr. Coleman will report his finding. Dr. Coleman recently spent two years in Hawaii and should have some very interesting things to tell of the Hawaiian sugar industry.

Dr. H. M. Tysdal, Head of the Sugar Crops Section, Beltsville, Maryland, will be in Louisiana for the meeting. The Louisiana sugar industry is happy that the Head of the Sugar Crops Section can visit with us from time to time to hear first-hand of our progress and our problems.

It is interesting to note that Dr. Ernest V. Abbott, Superintendent of the U.S.D.A. Houma Sugar Station, received a superior service award from the United States Department of Agriculture recently. Dr. Abbott was cited for leadership in the production of improved disease resistant varieties and for basic research on cane diseases, establishing him as a world authority in this field. Dr. Abbott is an old friend to the Louisiana sugar industry. His ability and contributions have been recognized many times by the Louisiana sugar industry. The members of the industry are indeed fortunate to have such a man conducting and directing research on their crop.

Mr. Stephen C. Munson, Chairman of the Contact Committee of the American Sugar Cane League, and Dr. E. V. Abbott, Superintendent of the Houma Station, invite and encourage all cane growers to attend the meeting.

# IN WASHINGTON WITH JOE FERRIS

*by Josiah Ferris*

The size of the Puerto Rican deficit has been the principal topic of conversation for the past several weeks among Washington representatives of domestic producers. First, the estimate was 100,000 tons, then it was upped to 150,000 tons and now well-informed sources say that the island crop will fall short of filling its quota by at least 200,000 tons.

The next item for speculation is what Messrs. Myers and company of the Sugar Division, U. S. Department of Agriculture will do about the shortage. The price of raws is going up and the apparent refiners' margin on the refined price of 9.10¢ has been reduced. With the summer seasonal demand just around the corner and reports of reduction in the Cuban crop, it is fairly evident that the price of raws will increase. Should the raw advance narrow the refiners' margin another ten or fifteen points, it looks like a sure bet that the refiners will hike their price even though it is well known that Mr. Meyers is strongly opposed to any further price increase for either refined or raws.

Should the refiners increase their price beyond the current 9.10¢ figure, some of the smart guessers say that Myers will first try to talk the price down before doing any of the several things he can to force the market to the level he may have in mind. The government could announce that it will allow the melting of excess quota raws in December, which would permit the use of all 1957 stock for distribution this year. It could also move beet sugar east as it did during World War II.

On May 29, 1957, the current Sugar Act, as amended was one year old. Despite the dire predictions made by lobbyists for industrial sugar users and Cuban sugar producers, the amendments as far as we know have been quite satisfactory.

The U. S. Department of Agriculture announced the allotments to processors of 541,125 tons, representing 90 percent, of the 1957 sugar quota for the Mainland Cane Sugar Area. These allotments, limiting the 1957 marketings of sugar by processors, replace the preliminary allotments of 450,000 tons which have been in effect since January 1, 1957.

These allotments are the same as contained in the "Recommended Decision and Proposed Order" announced by the Associate Administrator of Commodity Stabilization Service on April 30, 1957.

The order limits allotments to 90 percent of 601,250 tons, the current 1957 Mainland Cane Sugar Area quota, pending substitution of final data for estimated data used in determining the allotments.

The individual allotments of the various processors became effective May 25, 1957.

**Help Wanted**

Field Overseer needed on plantation.

Address replies to (A. 1) c/o the American Sugar Cane League, 414 Whitney Building, New Orleans 12, Louisiana.

# OFFICIAL PRICES 1956-57 SEASON

The following letter was mailed to all Louisiana sugar mills by the Louisiana ASC office on April 29th confirming the prices issued by the Louisiana Sugar Exchange during the 1956-57 Louisiana Pricing Period.

The Pricing Period began on Friday, October 5, 1956 and ended on Thursday, February 28, 1957 for Blackstrap Molasses and on Thursday, April 25, 1957 for Raw Sugar.

The Louisiana Sugar Exchange, Inc., New Orleans, Louisiana, quotes the following as the official average prices of the following grades of sugar and molasses sold on this exchange during the weeks ending as indicated:

Week ending October 11, 1956
Raws 6.15, Blackstrap 21.20
Week ending October 18, 1956
Raws 6.17, Blackstrap 22.00
Week ending October 25, 1956
Raws 6.24, Blackstrap 23.30
Week ending November 1, 1956
Raws 6.40, Blackstrap 23.96
Week ending November 8, 1956
Raws 6.225, Blackstrap 24.00
Week ending November 15, 1956
Raws 6.18, Blackstrap 24.75
Week ending November 22, 1956
Raws 6.17, Blackstrap 25.42
Week ending November 29, 1956
Raws 6.29, Blackstrap 27.00
Week ending December 6, 1956
Raws 6.38, Blackstrap 27.00
Week ending December 13, 1956
Raws 6.31, Blackstrap 27.00
Week ending December 20, 1956
Raws 6.26, Blackstrap 27.00
Week ending December 27, 1956
Raws 6.28, Blackstrap 27.00
Week ending January 3, 1957
Raws 6.31, Blackstrap 27.00
Week ending January 10, 1957
Raws 6.34, Blackstrap 27.00
Week ending January 17, 1957
Raws 6.37, Blackstrap 27.00
Week ending January 24, 1957
Raws 6.22, Blackstrap 27.00
Week ending January 31, 1957
Raws 6.12, Blackstrap 27.00
Week ending February 7, 1957
Raws 6.01, Blackstrap 27.00
Week ending February 14, 1957
Raws 6.015, Blackstrap 27.00
Week ending February 21, 1957
Raws 6.02, Blackstrap 26.00
Week ending February 28, 1957
Raws 6.04, Blackstrap 26.00
Week ending March 7, 1957
Raws 6.08
Week ending March 14, 1957
Raws 6.09
Week ending March 21, 1957
Raws 6.14
Week ending March 28, 1957
Raws 6.12
Week ending April 4, 1957
Raws 6.11
Week ending April 11, 1957
Raws 6.10
Week ending April 18, 1957
Raws 6.03
Week ending April 25, 1957
Raws 6.00

The season's average price of raw sugar is 6.1783 cents per pound.

SEASON'S AVERAGE FOR BLACKSTRAP 25.7443

The prices of standard sugarcane for mills located in the three freight areas are as follows:

(a) 6.526 dollars per standard ton for all mills except those located in the areas defined in (b) and (c) below:

(b) 6.446 dollars per standard ton for mills located north of Bayou Goula between the Atchafalaya and Mississippi rivers and southeast of New Iberia west of the Atchafalaya river.

(c) 6.393 dollars per standard ton for mills located north and west of New Iberia west of the Atchafalaya river.

The season's average price of blackstrap molasses for the period October 5, 1956 through February 28, 1957, is 25.7443 cents per gallon and the molasses bonus is 72.067 cents per actual net ton of sugar cane.

# GOVERNMENT AND THE SUGAR MARKET

*Address delivered April 22, 1957 by Lawrence Myers, Director, Sugar Division, Commodity Stabilization Service, U. S. Department of Agriculture Before the Sugar Club of New York*

Mr. President, Members and Guests of the Sugar Club:

It is a privilege to be permitted again to address you gentlemen who operate this nerve center of the World Sugar Trade. Some weeks ago, when my friend Joe Elvove invited me, I assumed that by the time I would talk to you this year's sugar situation would have unfolded and that in large part I would be able to discuss the year in retrospect. However, both Dame Nature and world buyers have been slow at disclosing their secrets. Possibly some of you already know the climax and ending of this year's sugar story; certainly I do not. In seeking light on the problems, I have observed that many who are in a position to know most about the market are most modest as to their ability to forecast. In fact, I might add that the confidence individuals exhibit in their own analyses and forecasts of this year's developments appear to be about proportional to their distance from the market.

That completes my discussion of the future of supply, demand and prices, and so let us turn to some other subjects.

It seems to me that three points merit descussion: First, quota management problems resulting from revisions in the Sugar Act; second, the administrative actions taken as a result of changes in the supply and demand situation since last summer; and third, some of the ground rules necessary for the successful administration of the Sugar Act.

### Changes in the Sugar Act

We now have a revised Sugar Act. True, the basic elements of the legislation remain the same as before but there have been significant changes. The changes in the legislation that are of interest to most of you gentlemen are the changes in the quota mechanism. At present and higher levels of domestic requirements all domestic areas participate in filling the increased quotas and the full duty countries participate to a much greater extent than ever before. Participation of the domestic areas in supplying increased requirements is not new, but it was reinstituted last year for the first time since the war. The greatly enlarged participation in quota increases by full duty countries is both new and significant.

Before I take up this matter, however, let me touch on two related matters.

From time to time question has been raised as to whether the revised quota provisions of the Sugar Act can be administered successfully. Definitely I think they can be, although this necessitates full recognition by both Government and industry of the changes that have been made.

Second, I think it is worth while to review how the quota mechanism operates seasonally and geographically. Under the Sugar Act all quotas apply to the calendar year as a whole or to the part that remains after the quota is established or revised. Therefore, a quota can be filled at any time after it is established within the calendar year to which it applies. Exact requirements cannot be determined until the end of the year.

In *every year except 1951* since the Sugar Act of 1948 has been in effect, we have had *short supplies on the east coast at the year end.* Year-end shortages are not of concern in the West because of stocks

(Continued on page 250)

# PUERTO RICAN DEFICIT REALLOCATED

The U. S. Department of Agriculture on May 24 announced proration of a deficit of 150,000 tons in the mainland quota for Puerto Rico to other domestic areas able to market additional sugar and to Cuba.

The quantity is available for proration to other areas because progress of the present crop in Puerto Rico indicates Puerto Rico will be unable to utilize that portion of its 1957 mainland quota.

This reallocation is made now, rather than after completion of the crop, to give the areas receiving additional quotas ample time and opportunity to market the increased quantities and thus provide assurance such sugar will be made available to meet 1957 consumer requirements.

The quotas for Puerto Rico to which this deficit applies consist of a mainland quota of 1,140,253 short tons, raw value and a quota for local consumption of 110,000 short tons, raw value.

Prorations and the revised quotas for the areas affected by the proration of the 150,000 ton Puerto Rican deficit are as follows:

| Area: | Prorations (short tons, raw value) | Adjusted quotas |
|---|---|---|
| Domestic Beet Sugar | 58,870 | 2,012,822 |
| Mainland Cane Sugar | 18,115 | 619,365 |
| Hawaii | 32,856 | 1,123,352 |
| Cuba | 40,159 | 3,041,454 |

Quotas for all other areas remain unchanged.

## SUGAR MARKET STATISTICS THROUGH MAY 24, 1957

| | Today | 1 Month Ago | 1 Year Ago |
|---|---|---|---|
| QUOTA RAWS DELIVERED NEW YORK | 6.45 | 6.10 | 6.00 |
| QUOTA RAWS DELIVERED NEW ORLEANS | 6.38 | 5.95 | 5.94 |
| WORLD SPOT RAWS (In Cuba) | 5.85 | 6.67 | 3.34 |

SUGAR FUTURES No. 6
(Closing Bid Prices)

| | July | Sept. | Nov. |
|---|---|---|---|
| Today | 5.97 | 5.99 | 5.96 |
| 1 Month Ago | 5.79 | 5.87 | 5.88 |
| 1 Year Ago | 5.53 | 5.56 | 5.61 |

OFFSHORE RECEIPTS AT NEW ORLEANS
(Long Tons, 2,240 lbs.)

| | To Date 1957 | Same Date 1956 |
|---|---|---|
| American | 156,227 tons | 142,510 tons |
| National (Godchaux) | 75,115 tons | 96,396 tons |
| Colonial | 58,953 tons | 75,975 tons |
| Henderson | 47,045 tons | 48,894 tons |
| Southdown | 17,657 tons | 20,598 tons |
| South Coast | 20,913 tons | 28,526 tons |
| Supreme | 30,783 tons | 46,835 tons |
| Totals | 406,693 tons | 459,716 tons |

* Long Ton (2,240 lbs.)

# W. E. HALEY RETIRES

W. E. Haley, entomologist at the Houma Experiment Station, retired on May 31 after 36 years of entomological service with the U. S. Department of Agriculture. His first assignment was with the old Sugar Station at Audubon Park and later, up to 1933, with the Sugarcane Insect Laboratory on Oak Street in New Orleans. From 1933 up to the time of his retirement he was stationed at Houma. In 1925 he took a 2 months' leave of absence to continue the work of collecting parasites of the sugarcane borer in Cuba. This work resulted in some of the first introductions of borer parasites into Louisiana, a project which was financed by some sugarcane growers.

All of his long service was spent in fighting insects of sugarcane. In cooperation with others he did much of the basic work leading up to the present recommendations for cultural and insecticidal control of the borer and soil pests. During the last few years he has been in charge of the borer overwintering and fall infestation surveys which are so necessary in determining the probable infestation in the spring and the final infestation at time of harvest.

In the retirement of Mr. Haley the sugar industry and the Houma Station lost the services of a valuable entomologist. He will be remembered as a man with a ready smile and handshake and a willingness to help. He and his wife bought a home in Georgia where they will live near one of their two boys. Mr. Haley's address is 211 Guinn St., Marietta, Georgia.

**PRODUCTION OF SUGAR BY TYPES, LOUISIANA 1956 CROP [1]**

| | |
|---|---|
| Raw Sugar, 96° | 673,589,485 lbs. |
| Turbinados | 81,368,000 lbs. |
| Granulated (Ref.) | 67,052,323 lbs. |
| Granulated (Plt.) | 11,785,700 lbs. |
| Washed Raws and Crystals | 5,438,928 lbs. |
| Total | 839,234,436 lbs. |
| Total, Raw Value | 863,248,918 lbs. |
| Total, Raw Value | 431,624 tons |
| Estimated in Magma | 128 lbs. |
| Cane Ground for Sugar (Net Tons) | 4,817,145 tons |

[1] Subject to change after all sugar is sold.
Source: Processor reports to U.S.D.A.

**PRODUCTION OF MOLASSES AND SYRUP, LOUISIANA 1956 CROP**

| | |
|---|---|
| Cane Syrup | 1,143,480 gallons |
| 1st Molasses | 1,150,873 gallons |
| 2nd Molasses | 1,233,328 gallons |
| Blackstrap Molasses Produced | 29,043,451 gallons |
| Blackstrap Molasses, 80° Brix | 31,915,956 gallons |
| Hi-Test Molasses (Invert) | 730,885 gallons |
| Cane ground for Syrup (Gross) | 53,862 tons |
| Cane ground for Hi-Test Molasses (Gross) | 32,087 tons |

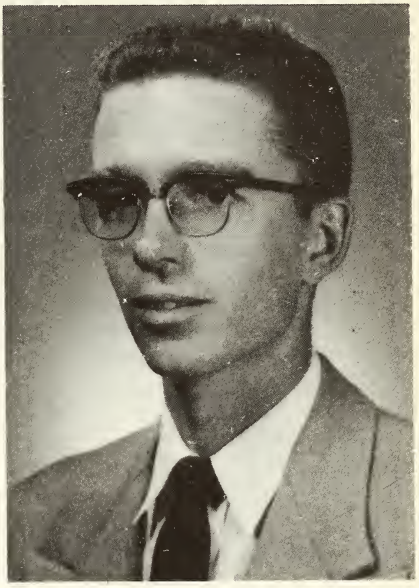
Source: Processor reports to U.S.D.A.

# DR. WILLIAM HENRY LONG III JOINS STAFF OF THE LOUISIANA AGRICULTURAL EXPERIMENT STATION

Pictured here is Dr. William Henry Long, III, recently employed by the Louisiana Agricultural Experiment Station as Assistant Entomologist to conduct research on sugar cane insects. Dr. L. D. Newsom, the Head Entomologist at the Station tells us Dr. Long is the "best qualified young man in the country to tackle the problem of soil insects in sugar cane."

Dr. Long has a special interest in soil insects. His M.S. thesis research at North Carolina State College dealt with the biology and seasonal history of the southern corn rootworm. His Ph.D. dissertation research at Iowa State College was on insecticide seed treatments on wireworm activities.

Dr. Newsom comments, "Dr. Long's work studying the movement of wireworms in the soil using larvae tagged with radioactive cobalt is an exceptionally outstanding example of fundamental research."



# DR. HENRY B. HASS HEADS AMERICAN INSTITUTE OF CHEMISTS

Dr. Henry B. Haas was named the new President of the American Institute of Chemists at their annual meeting May 23. He was elected to serve for one year.

Dr. Hass, who is president of Sugar Research Foundation of New York, succeeds John Nair of the Lipton Tea Company, the outgoing president.

Dr. Hass, a resident of Summit, New Jersey, is a graduate of Ohio Wesleyan, with M.A. and Ph.D. degrees from Ohio State.

He joined the staff of the chemistry department at Purdue University in 1928 and was named head of the department in 1937, which post he filled until 1949 when he joined General Aniline & Film Corporation.

In 1952 Dr. Hass became President of Sugar Research Foundation where his activities have been highlighted by the new developments in the field now known as sucrochemistry. Most notable has been the development of sucrose esters.

He is a contributor to "The Science of Petroleum," the Encyclopedia Britannica and the Encyclopedia of Chemical Technology. He is a Fellow of the International Congress of Anesthetists and a recipient of the "Modern Pioneer" award of the National Association of Manufacturers.

Dr. Hass is a Councilor of the American Chemical Society and Chairman of the New York Section, former President of the Indiana Chemical Society and a member of many other organizations of chemists and technologists.

# LEAGUE OPPOSES FURTHER FREIGHT RATE INCREASES

The Louisiana sugar industry was well represented at a Louisiana Public Service Commission hearing on freight rates in Baton Rouge on April 29. The following persons testified in opposition to further increases of intrastate freight rates on sugar cane and sugar: C. S. Churchill, Hampton P. Stewart, Horace Wilkinson III, Irwin Arceneaux, Louis Arceneaux, J. U. Melancon, Edw. Burguieres, William M. Nuttall, G. J. Durbin, E. B. McKinney, John Black, John B. Levert, John A. Trotter.

The League witnesses stated definitely that any additional increase in rail rates would result in substantial additional diversion to other means of transportation. The point was made that in many instances diversion does not result immediately from a particular freight rate increase. In most factories, in order to load sugar in trucks or barges, rather than in railroad cars, certain equipment must be installed and mechanical adjustments made. Arrangements must also be made to sell the sugar to a refinery which is equipped to accept such sugar by truck or barge. In the past this has been a serious problem; but, because of the increasing number of sugar producers who wish to ship by truck due to increases or threatened increases in rail freight rates, four of the seven Louisiana refineries accepted truck shipments of 1956 crop raw sugar. At least one other refinery will accept truck shipments of 1957 crop raw sugar. It appears obvious that decisions regarding future rail freight rate increases will be an important consideration in determining whether the remaining two refineries make the conversions necessary to accept sugar by truck.

The League witnesses also stated that the threat of additional rate increases can cause shippers to shift from rail to other means of transportation. They pointed out that we are seriously threatened with three additional rail freight rate increases.

The spokesmen for the sugar industry stated that the railroads are simply pricing themselves out of the transportation business.

## GOVERNMENT

(Continued from page 246)

of Hawaiian sugar and the seasonal peak of beet sugar supplies. Neither are year-end shortages of concern in the South because of the mainland cane harvest. When quotas are too small the shortage is felt in the Northeast. This will be true to an even greater degree in the future than it has been in the past.

In the past, as you know, we have tended particularly to keep our controls on the low side during the early part of the year. There were five reasons for this: First, our uncertainty as to the year's final requirements; second, the fact that demand is usually low during the early weeks of a calendar year; third, the Caribbean crops tend to weigh heavily on the market during the harvest season; fourth, it is desirable to avoid the many technical difficulties that are involved when quotas are reduced late in the year; and fifth, *it was the purpose of the Department to keep quotas small enough so that sugar would sell in the domestic market at a significant premium over prices prevailing in the world market.*

A collateral aspect of this policy appears to have led to misunderstandings at times, even here in New York. If we start out with too low an estimate it is a mathematical necessity that quotas will be increased during the course of the year. So far as possible the Department attempts to make the additional supplies available during the season of heavy distribution or at other times when there is evidence that

the market has a demand for additional quantities of sugar. Although I think there is *universal agreement that this should be the objective for timing quota increases*, the quota actions have been interpreted as efforts to bear the market. I think you refiners and brokers could perform a real public service by making a study with recommendations on this problem before our hearing on 1958 requirements. Just how impressed are you and your customers with beginning estimates that the whole world knows must be increased? How surprised are you when the inevitable increases subsequently are made? These questions, you will observe, do not involve adjustments for unanticipated changes in demand but merely the issue of initial estimates that are distinctly below a conservative appraisal of the year's requirements.

Heretofore, it was a rather safe and simple practice to wait until late in the year before making the final quantities available so long as we could dip into a huge Cuban surplus that could be shipped quickly to this country and pinpointed into the area of need. Currently the Cuban surplus does not exist and supplies made available under present quota increases are diffused.

That brings me back to the changes brought about by the revised legislation. Under the amended Act, 55 percent of increased requirements are supplied by the domestic areas and 45 percent by foreign areas. Cuba, that formerly supplied 96 percent of such increases, will now supply approximately 30 percent and full duty countries as a group will supply 15 percent. Of the domestic suppliers, Puerto Rico, which ships to the east coast, will supply 13 percent. If all of these areas are able to fill promptly any additional quotas that might be supplied to them late in the season, the east coast would get 58 percent of any late season increase in the consumption estimate. Under such conditions, if the Northeast should require an additional 50,000 tons of sugar late in the year, a quota increase of 90,000 tons should supply it to them. The remaining 40,000 tons would, of course, be marketed by producers in the South and West.

However, the Puerto Rican industry has indicated that it will have a deficit this year. In such case, any increase in its quota would be reallocated to the other domestic areas. This would restrict supplies to the Northeast to the 45 percent that would come from Cuba and the full duty countries. On this basis it would require an increase of 110,000 tons in the total estimate to make 50,000 tons available to the Northeast. From a 110,000-ton quota increase Peru, the Dominican Republic and Mexico would each obtain a quota increase of roughly 5,000 short tons which would be a shippable quantity if the sugar were assembled and a small ship or part cargo space were readily available. The one percent increase that is divided among the various other full duty suppliers could be filled only in the event their supplies were already in this country.

It is obvious that the lack of readily available supplies or bottoms might further reduce the quantity that could be shipped to the Northeast under a particular quota increase. If, to make an exaggerated assumption for a point of emphasis, Cuba alone could be counted upon for the additional supplies, it would require a total increase of 170,000 tons in the consumption estimate to make 50,000 tons available to the Northeast. Of such total the 25,000-ton increase in the quota for full duty countries would, according to our assumption, be unfilled at the end of the year and 95,000 tons would be marketed by our domestic areas outside the Northeast. Over

a short period it is doubtful that the larger sales in other areas would relieve the shortage in the Northeast.

At this point I should like to observe that Cuba, the Dominican Republic, Mexico, and Peru have each given us assurances that they will fill their quotas, regardless of how much the world price may exceed our domestic price. It is assumed that these commitments will be met despite the strong demand and favorable prices in the world market and despite recent sales by the Cuban Sugar Stabilization Institute.

The above examples should indicate the nature of the changes in the quota mechanism of the Sugar Act. It is always a mistake to assume that there is a particular formula which can be followed successfully from year to year in administering any such program as our quota controls. It would be particularly unfortunate to assume that either the Government or the industry can operate in exactly the same way under our present legislation that they have in the past. The Department of Agriculture, the refiners in the North East and the refiners and beet processors in other parts of the country must all adjust to the new legislation.

I have already emphasized that *tardy quota actions* might necessitate larger increases in total quotas than would otherwise be required in order to provide needed supplies for the Northeast and I have emphasized that such actions might result in the dumping of unneeded supplies onto the markets of the South and the West. It would be a mistake, however, to assume that the recognition of such facts will make it possible for the Government to act in the suggested manner. If refiners undertake to treat each available lot of sugar as a distressed cargo and all quota supplies as surpluses, they will force the Government into ever tighter controls. Even more important, the major factor in determining whether or not particular quotas are adequate probably will be the marketing practices of the beet and Hawaiian industries. Unless they supply their normal trade territories consistently throughout the year they will create a vocuum that will be filled by other off-shore and foreign supplies. The supplies thus lost to the east coast can be replaced only through enlarged total marketing quotas.

From all this I trust it has become clear that the Government in administering the Sugar Act undertakes in great part simply to respond to the actions of others. Whether quotas prove to be adequate or inadequate, prompt or tardy, depends upon the composite actions of buyers and sellers, throughout the country.

### Quota Actions

Starting late last July evidence developed of a rather persistent demand for raw sugar. Later came responses to the threats of the east coast shipping strike and to the sharp price increases in the world market. As a result of the rising demand, total quotas were increased gradually to 9,000,000 tons. I shall not undertake to repeat the many dire forecasts that were heard each time the Department responded to the ground swell of demand for more sugar. I must point out, however, that the entire 9,000,000 tons were marketed and charged to quotas and that the trend of domestic prices continued upward with the monthly average price for December being the highest for the year.

My purpose in referring to last fall's developments is to illustrate the fact that for purposes of quota control it is immaterial whether increased demand reflects larger immediate consumption, purchases for stockpiling, or the replacement of sugar that has been marketed outside its customary trade territory. Our task is to respond to the mar-

ket. We must not fight it.

As we came to 1957 it was apparent that the Cuban surplus had disappeared, that world supplies were tight, and that world prices were strong and might, under the proper provocation, become explosive. These facts and possible dangers did much to shape our actions. We could properly call upon our foreign suppliers to fill their U. S. quotas at stable prices since they normally receive a substantial premium on quantities sold in our market. However, we could not in fairness ask foreign suppliers to protect us by withholding unnecessarily huge quantities from a hungry world market if we, ourselves, were indifferent about our needs. The first essential, therefore, was to establish quotas at a level that would be as close as possible to the final requirement. As you will recall we set the 1957 total quota at 8,800,000 tons in December and raised it to 9,000,000 tons in January when there appeared to be a further tightening in the situation.

Next to the assuring of adequate supplies came the maintenance of stability in the domestic market, despite the wild fluctuations and sharp rises in the world market. For the time being, *it may be said that we have called a moratorium on considerations of higher prices in the domestic market.* This has caused some in our producer group to be unhappy. Once it appears that the market has passed its peak the price discussions will break out again with renewed vigor. The response that has come from consumers throughout the nation since the New York press publicized *one proposed march on Washington* suggests that the price discussions, when resumed, may be carried on vigorously by both sides. In the meantime we ask only that the calm may continue on the domestic front.

## Ground Rules

In referring to ground rules I have no intention of becoming encyclopedic. I hope that mention of the subject and a few observations will be suggestive of a more adequate train of thought.

The Sugar Act program has been characterized as the most effective of all of our agricultural programs. Certainly it is vital to our producers of sugarcane and sugar beets and to the associated processors. Furthermore, through its protection for refiners it is the only agricultural program I know that extends its benefits to all parts of the producing and processing industry it serves. Also, the Sugar Act program is the only program that directly and intentionally passes on to our foreign suppliers most of the benefits of our protected domestic market.

These benefits bring responsibilities as well as privileges to all of our suppliers. The program has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been sold to Congress and to the American public in part as an insurance policy under which American consumers pay premiums for sugar in normal years in order to have the protection of assured supplies at stable prices during periods of shortage or inflation in the world market. All of our suppliers can feel proud that the stabilization effort worked so successfully in 1950 and 1951 and to date in 1957. It is the strongest argument I know for continuing the program.

By and large the Sugar Act has operated as intended. This has been possible because the leaders in the various branches of the domestic sugar industry have supported administrative actions looking toward the long-time stability of their industry. By and large we have also had the effective support of our major foreign suppliers.

Although the record of support has been excellent, there have been some discordant notes and moments of anxiety. At times proposals have been made for achieving short term gains at the risk of discrediting and possibly destroying the whole program. In view of all that is at stake, it is rather shocking that any interested party would be willing to place the program in jeopardy. It should be the responsibility of the industry to protect the program from its own mischievous proposals.

During the past year fears have been expressed with respect to our foreign supplies. Earlier this had also been of concern to the Congress and when the Sugar Act was last up Section 202(e) was written into the Act to provide for a reduction in future quotas of any foreign country that fails by more than 10 percent to fill its U. S. quota in a year when world prices are above domestic prices. Recent sales by the Cuban Sugar Stabilization Institute without a clear explanation of where the sugar is to come from has *led to renewed questions.* It is to be hoped that the source of the sugar

will soon be disclosed. In the meantime we must rest on the record of Cuba's past performances and its assurances that it will continue to protect supplies for the U. S. market.

Although the Sugar Act is a tremendously effective instrument for benefiting the sugar industry, it cannot solve all of the industry's problems.

As I have emphasized repeatedly, the Sugar Act can afford no alternative to efficient production. Fortunately the domestic industry has some of the most efficient producers in the world. These producers must act as pace setters for our industry.

Neither can the Sugar Act become a substitute for effective marketing. Why in sugar one of the chemically identical twins should always sell at a discount under the other is a long-standing mystery. However, when the Chicago basis price, incorporating various allowances and discounts, is below any seaboard basis, as at present, it raises fundamental questions as to the entire price structure for sugar. Certainly the resulting discount in grower returns cannot fairly be attributed to any administrative action under the Sugar Act.

The Sugar Act has freed our major sugar supplying industry, foreign and domestic, from its historic status under which long periods of depression and insolvency were interrupted by brief periods of prosperity. One of these was the three-month period referred to as "The Dance of the Millions". If our domestic and foreign suppliers were willing to forego the benefits of the Sugar Act they would be free also, of course, to press all advantages to the hilt. However, so long as the industry accepts the benefits of the Act, it must also accept the inherent restrictions. Most emphatically, the industry must be conservative about pressing the advantages, either as sellers or as buyers, that result from the Sugar Act and its regulations. With this I return to the theme: The successful administration of the revised Sugar Act will be dependent primarily upon the moderation and self-policing of the sugar industry.


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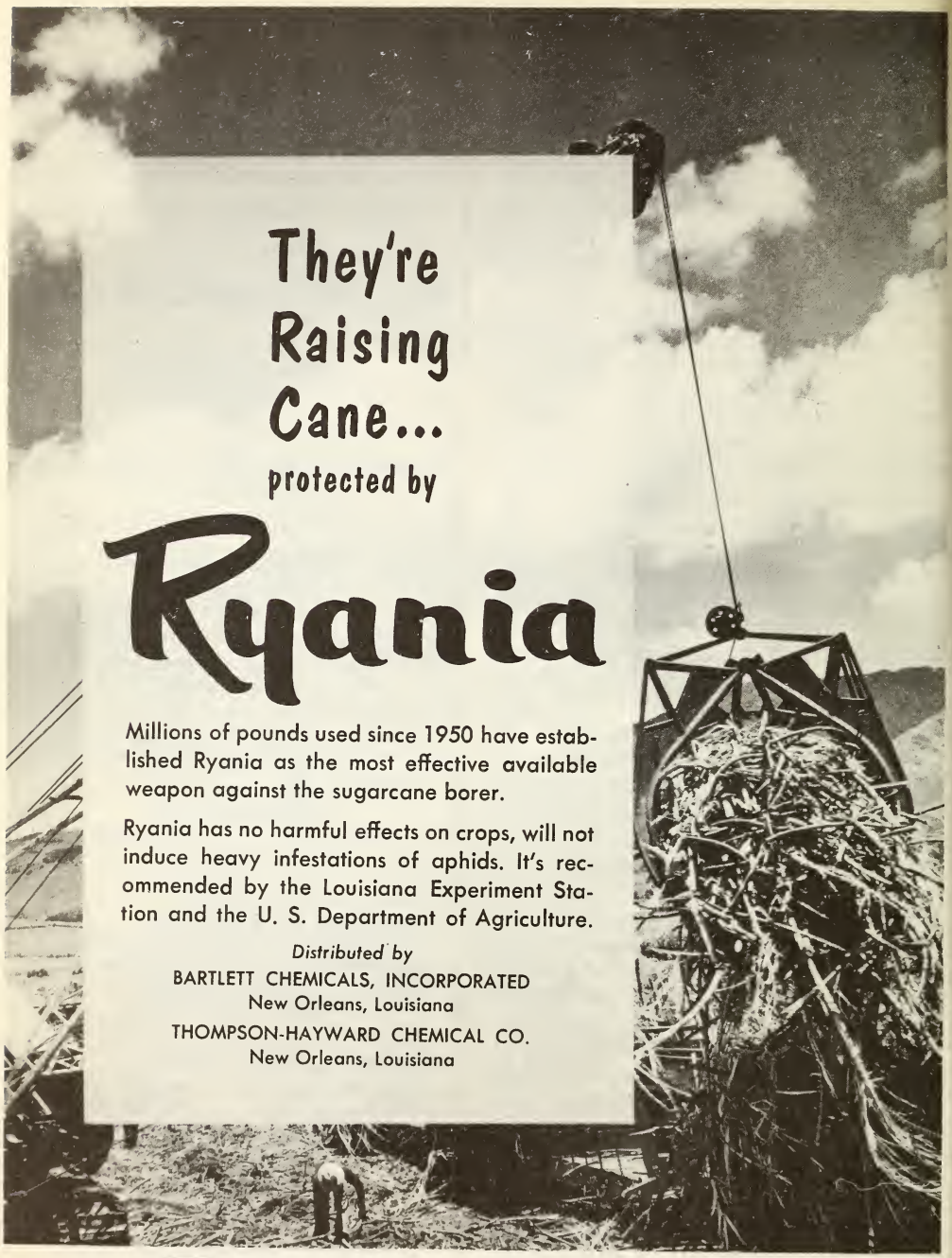
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# THE SUGAR BULLETIN

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Published on the First and Fifteenth of each month
in the interests of the Domestic Sugar Cane Industry

THE SUGAR BULLETIN

414 Whitney Bldg., New Orleans 12

Gilbert J. Durbin, Editor — Andrew W. Dykers, Managing Editor

Lloyd L. Lauden, Agronomist and Field Representative

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# UP FRONT WITH THE LEAGUE

*by A. W. Dykers*

### Hawaiian Report

Time (and money) flies—here we are back home again, and flat broke; but we had a wonderful time visiting in Hawaii.

We found our Ole Mule doing much better when we arrived, but this is just about par for the course. For some reason sugar prices seem to improve after the Louisiana pricing period ends regardless of when that event takes place.

Before we get involved in our report we want to thank the people who made it possible for us to see the Hawaiian sugar industry in operation. Our thanks to Mr. Slator Miller, Vice-President of the Hawaiian Sugar Planters' Association, who alerted his people about our visit; to Mr. S. J. Platt, Secretary of the Association, for receiving us so cordially when we arrived in Hawaii; to Mr. Nelson Prather, Director of Public Relations, for assigning Ted Wigit as our guide, and our special thanks to Mr. Wigit for his courteous attention to our wants and wishes while we were receiving a liberal education on the part scientific research has played in the development of the Hawaiian Sugar Industry.

We are also particularly grateful to Mr. E. C. Bryan, Assistant Manager of the Ewa Plantation Co., for his personally conducted tour of the Ewa properties, and to Dr. R. P. Humbert, Principal Agronomist of the Hawaiian Sugar Experiment Station, for his personally conducted tour of the station.

We greatly appreciate the fact that we were privileged to meet and talk with the eminent Dr. H. L. Lyon, Director Emeritus of the Experiment Station, before his sudden death. Dr. Lyon died in his sleep not twelve hours after our meeting and Hawaii and the World lost a great man of science.

### Cost-Price Squeeze

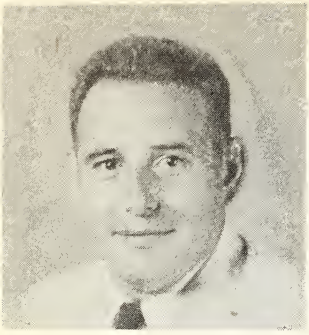
Sugar is Hawaii's largest industry. It represents an investment of over $175,000,000. The crop takes two years to mature and the average production of sugar is better than 10¾ tons per acre. Even with this enviable record, however, the profits earned by the sugar industry are nothing to brag about. The HSPA says a "cost-price squeeze" has kept profits at a low level. "Costs of all types: labor, materials, supplies, services, equipment," the Association says, "have been going up steadily. The price of sugar has not kept pace."

When we received this report we had to look around to make sure we were not back in Louisiana but then we remembered that the cost of producing and selling Hawaiian sugar runs into big money and that these people depend on the same Old Mule driver that we do, which, in itself, is quite a handicap.

### The Experiment Station

The Hawaiian Sugar Experiment Station was established in 1895. Prior to our visit we thought of an agricultural experiment station as being "out on the country", but this establishment is almost in the heart of the City of Honolulu! The land

(Continued on page 266)



# IN THE FIELD WITH LLOYD LAUDEN

*by Lloyd L. Lauden*

## Variety Talk

Each year about this time members of the U.S.D.A., L.S.U., and the League meet in conference to discuss, plan, and decide what new unreleased varieties are to be discarded, kept, or increased for future release to the industry. Since the decisions made at this meeting will affect in the near future every sugar cane grower in the Louisiana sugar industry, this meeting is probably the most important sugar cane meeting of the year.

A meeting of this committee took place in New Iberia on June 6. Present at this all important work meeting were the scientists of L.S.U. and the U.S.D.A., the three Primary Station operators, the Chairman of the League's Contact Committee, and the League's Agronomist. The committee discussed each variety on the 51 Secondary Increase Stations as well as all varieties on the 3 Primary Stations and on the 12 Test Fields.

The discussion of each variety takes considerable time. The good and bad features of each variety must be carefully weighed. When in doubt, the committee always holds a variety over for another year's test. Many varieties look so pretty to the eye but have no sugar. It is always disappointing to have to discard a large barrel, high yielding cane; but if the variety is low in sugar it is of no value to the industry. There is never any question about the obviously good or the obviously bad, but for those unreleased canes that have sugar plus other good qualities but lack yield or have a susceptibility to diseases or insects the decision is not easy. Many new varieties look good in plant cane, but stubbles very poorly. Some new varieties look good for the first few years of test, then fail for one or many reasons. This is most disappointing.

The committee discussed twenty varieties at their June 6th meeting. Arriving at a decision on this number of varieties used up three and one-half hours. It is impossible to measure the amount of time spent collecting the information pertaining to these varieties. More than twenty men give some part of their time doing research on these varieties. Some of these men give their full time to this work.

The decisions made at the June 6 meeting that may have an effect on the industry in the near future are: (1) that C. P. 52-68, a good sugar, good yielding, and erect variety, be increased to the limit of the seed supply on all Increase Stations; (2) that the seed supply of C. P. 52-68 be planted one cane using a short lap to more rapidly increase the seed to have enough seed for distribution in 1958; (3) that seed of this variety be transferred this fall from Increase Stations where there is a large amount of seed to stations where the supply is limited in order to spare the grower a long haul if the variety is released in 1958; and

(Continued on page 271)

# IN WASHINGTON WITH JOE FERRIS

*by Josiah Ferris*

The hearing on Proportionate Shares for the Mainland Cane Area will be held in New Orleans, Louisiana, July 9, 1957, according to U. S. Department of Agriculture Sugar Division officials. Florida growers will meet with the Louisiana grower representatives on July 8th, to discuss proposals for next years' cane acreage.

On August 7, 1957 hearings on Wage Proposals and Fair Price for sugar cane will be held at Thibodaux, Louisiana.

A joint meeting of the Boards of Directors of the Sugar Association, Inc., Sugar Research Foundation, Inc., and Sugar Information, Inc., was held in New York June 6, 1957. In his report to the directors Ernest W. Green, President of Sugar Association Inc., made such a clear, concise explanation of the purposes and duties of the three corporations we thought it would be of interest to all sugar cane growers and processors. Mr. Greene's statement in part was as follows:

"The Sugar Association, Inc., Sugar Research Foundation, Inc., and Sugar Information, Inc., are incorporated as Non-Profit Membership Corporations pursuant to the Membership Corporations Law of the State of New York.

"The Sugar Association is the senior among the affiliates. It determines basic policies, receives all contributions from members and allocates to Sugar Research Foundation and Sugar Information, and to the program of advertising and public relations, respectively, amounts of money consonant with budgets which have been approved by its Board of Directors. All Membership Contracts are entered into with The Sugar Association. Sustaining Members are, ipso facto, members of each of the other two affiliates, and Associate Members are also members of Sugar Research Foundation.

"Sugar Research Foundation, as its name implies, conducts, or arranges, by grant or otherwise, for the conduct of research and promulgates scientific publications.

"Sugar Information carries on educational work, publicity, prepares and distributes technical and popular publications which deal with the dietary status of sugar and its uses in foods and beverages, as well as in non-food products. The program of advertising and public relations is carried on in the name of Sugar Information.

"It is the constant concern of the Directors and Officers of The Sugar Association to exercise fully their responsibilities and authority, without any dilution or abdication thereof, but with care at all times that the manner of such exercise shall not unduly hamper or obstruct the efficient and effective operation of the affiliate corporations.

"The cumbersome procedures which would be entailed by separate meetings of the Members, of the Boards of Directors and of the Executive Committees of the three affiliated corporations are avoided by holding joint meetings of each of

(Continued on page 270)

# THE VALUE OF RAW SUGAR IN THE RATIONS OF GROWING-FATTENING SWINE

*C. B. Singletary, K. G. Coulon and G. L. Robertson, Louisiana State University and Agricultural and Mechanical College, Agricultural Experiment Stations*

The value of sugar usually prohibits its use in livestock feeds. However, in recent months sugar cane farmers with surplus raw sugar have raised questions concerning the feasibility of feeding such sugar to livestock, particularly hogs. This past year there were about 2,000 acres of over-acreage cane in Louisiana, and the state average for raw sugar produced per acre of cane is 3,800 pounds (estimate from Extension Service). This means that some 7,600,000 pounds or raw sugar might have been used for livestock feed. If this sugar is valued at three cents per pound it appears that a quarter of a million dollars might have been salvaged from this past year's over-acreage cane, much of which was left standing in the fields due to lack of information on how it could be used.

It has been established that sugar is a desirable ingredient for increasing early consumption of starter rations by baby pigs. Performance of pigs receiving such rations has improved with increased levels of sugar up to 20 per cent of the total ration. Lewis (1943) compared pig starters containing 0 to 20 per cent sugar offered simultaneously as meal and pellets. The pigs consistently preferred the pellet with 20% sugar mixed in the ration before pelleting. The addition of sugar increased consumption and significantly improved feed efficiency regardless of the form of feed used.

Hanson (1954) found that pigs ate 81.5 per cent of a 10 per cent sugar ration, 13 per cent of a 5 per cent sugar ration, and 5.5 per cent of a non-sugar ration when allowed free-choice access to the three rations. Wilcox (1952) found that the feeding of cane sugar to beef cattle and pigs for about 3 days before slaughter tended to improve slightly the dressing percentage of the animals and the flavor of their livers.

Heck (1956) states that weight loss of crossbred market hogs during shipping was markedly reduced by feeding brown sugar in the drinking water at the rate of 3 pounds per 5 gallons of water 48 hours prior to loading.

Sugar has the same nutritional value as starch and the results obtained with baby pigs indicate that the use of surplus raw sugar in rations for hogs up to market weight might be a profitable method of disposing of it.

This study was designed to evaluate raw sugar in terms of its effect on growth, efficiency of feed utilization and carcass quality of pigs, when fed at different levels from approximately three months of age to market weight.

## Experimental Procedure

Twenty-eight pigs with an average initial weight of sixty-four pounds were selected and equally divided on the basis of weight, age, and sex into four sanitary, concrete pens of seven pigs each. The composition of the rations is shown in Table I.

Ration 1 was considered the control and compared to Rations 2, 3, and 4 in which sugar replaced corn at the rate of 10, 20, and 30 per cent, respectively. Wheat shorts, alfalfa meal, and meat and bone scraps remained constant in all rations. The percentage of the vegetable protein supplement, soybean oil meal, was altered for the purpose of stabilizing the total protein con-

TABLE I. Composition of Rations (lbs.)

| Ration | Lot 1 | Lot 2 | Lot 3 | Lot 4 |
|---|---|---|---|---|
| Ground yellow corn | 58.5 | 46.5 | 34.5 | 21.5 |
| Raw sugar | -- | 10.0 | 20.0 | 30.0 |
| Wheat shorts | 15.0 | 15.0 | 15.0 | 15.0 |
| Alfalfa meal | 10.0 | 10.0 | 10.0 | 10.0 |
| Meat and bone scraps | 5.0 | 5.0 | 5.0 | 5.0 |
| Soybean oil meal | 10.0 | 12.0 | 14.0 | 17.0 |
| Aurofac* | 0.5 | 0.5 | 0.5 | 0.5 |
| Mineral mixture** | 1.0 | 1.0 | 1.0 | 1.0 |

Crude protein content of all diets = 16%.
* 1.8 gm. Chlortetracycline and 1.8 mg. vitamin $B_{12}$ per lb.
** Mineral mixture---equal parts salt, steamed bone meal, and ground limestone, plus trace amounts of iron, copper, cobalt, and magnesium.

tent at 16 per cent in all diets. All rations were kept before the pigs at all times in self-feeders. Water was also constantly available. Pigs were kept on concrete floors in inside pens throughout the trial. Weight gain and feed consumption data were collected at 14-day intervals throughout the experiment.

As the animals reached 200 lbs., they were removed from the experiment and slaughtered in the L.S.U. meat laboratory for carcass evaluation studies. Average daily gains for each lot and average number of days to reach 200 lbs. (Table II) were based on the actual number of pig days per lot. The pigs were taken on a 250 mile truck ride prior to slaughter to determine possible effects on rates of shrinkage.

Daily gains, percent shrinkage, backfat thickness and yield of primal cuts were analyzed by the method of analysis of variance described by Snedecor (1956).

## Results and Discussion

Feed lot performance and other pertinent data are summarized in Table II.

The rations containing sugar promoted more rapid growth than the control ration. The pigs receiving a level of 20 per cent raw sugar apparently made the highest daily gains and utilized their feed slightly more efficiently than the other lots. However, analysis of variance showed no significant difference in average daily gains among the four groups. The animals were group fed and the feed consumption data were not amenable to a test of significance. The percent shrinkage of 4.60 for the pigs in Lot 4 was slightly lower than that in the other lots but was not significant.

There was no evidence of scouring by any of the pigs during the test. The pigs on the higher levels of sugar did exhibit lack of bloom as indicated by roughness of hair coat. Roughness of hair coat seemed to become progressively worse as the level of sugar increased. This roughness of hair coat may have been due to a slight deficiency of fat in the diet. As the corn was replaced by sugar, the fat content was progressively decreased. The control ration had a fat content of 3.9 percent as compared to 2.3 percent for the ration with the 30 percent sugar level. The 2.3 percent fat diet could have been suboptimum and low enough to produce (slight symptoms such as) the rough hair coat.

Carcass data are presented in

(Continued on next page)

TABLE II. Response of Pigs to Different Treatments

| Item | Lot 1 No Sugar | Lot 2 10% Sugar | Lot 3 20% Sugar | Lot 4 30% Sugar |
|---|---|---|---|---|
| Average initial wt. (lbs.) | 64.7 | 64.6 | 64.4 | 64.3 |
| Av. total gain per pig (lbs.) | 138.4 | 142.5 | 147.7 | 143.4 |
| Av. No. of days required | 82 | 79 | 80 | 82 |
| Av. daily gain | 1.68 | 1.80 | 1.85 | 1.74 |
| Av. daily feed | 6.60 | 6.97 | 6.86 | 6.56 |
| Feed per cwt. gain | 391 | 386 | 371 | 375 |
| Percent shrinkage 24-hour period prior to slaughter* | 4.69 | 5.61 | 5.64 | 4.60 |

* Includes 250 mile trip to abbatoir.

Table III.

The dressing percentage was not altered by either level of sugar. The four lean primal cuts of ham, loin, Boston butt, and picnic shoulder showed slight variations that were not significant. A difference in fat deposition as indicated by backfat thickness to determine carcass grade resulted in 43 percent Choice No. 1 and 47 percent Choice No. 2 carcasses. Average carcass length for all lots was less than 29 inches.

Although there was some variation in carcass grades in each lot, the differences in average backfat thickness between lots were not significant.

## Conclusions

In this experiment:

1. Pigs fed from sixty to two hundred pounds utilized a ration containing up to thirty percent raw sugar with satisfactory results from the standpoint of gain and feed efficiency.

2. The raw sugar levels did not affect the thickness of backfat.

3. The high percentage of Choice No. 2 carcasses was principally due to an inheritable trait and not the rations fed.

4. Carcass quality and cut out values were not significantly influenced by the levels of sugar fed in this experiment.

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Hanson, L. E., J. M. Russo and

TABLE III. Summary of Carcass Data

| Item | Lot 1 No Sugar | Lot 2 10% Sugar | Lot 3 20% Sugar | Lot 4 30% Sugar |
|---|---|---|---|---|
| Final weight, lbs. | 203.1 | 207.1 | 212.1 | 207.7 |
| Slaughter weight, lbs. | 193.5 | 195.4 | 200.1 | 198.1 |
| Cooler shrinkage, % | 3.48 | 3.66 | 2.58 | 3.44 |
| Cold dressed wt., lbs. | 151.2 | 153.6 | 156.7 | 155.6 |
| Dressing percent | 78.1 | 78.6 | 78.3 | 78.5 |
| Lean primal cuts, % | 47.5 | 45.6 | 47.2 | 46.3 |
| Carcass length, inches | 28.8 | 28.5 | 28.8 | 28.4 |
| Av. backfat thickness | 1.71 | 1.67 | 1.68 | 1.71 |

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(Continued from page 259)

area it occupies is not very large and the part we covered was probably less than an acre in size. In this shall area we saw all sorts of experiments being conducted. We saw thousands of cane seedlings in boxes right out in the front year, so to speak, and Dr. Humbert pointed to a border where he said practically every commercially used cane variety was growing. There were hot houses in which a worker was using an umbrella for protection from the sun, which prompted us to stay outside, and close by were two glass "showcases" with canes growing up through holes in the floor. Dr. Humbert explained that these were cold resistant experiments and that the root and air temperatures were being controlled. The big difference in the size of the plants was proof positive that the scientists were learning something.

A few feet away from the glass "showcase", workers were slicing joint-long pieces of cane into four or five sections preparatory to making a Gieger count to obtain data for another experiment. All in all, the place was a beehive of activity.

Then we went into the library and could hardly believe what we saw. This building is as large or larger than the branch libraries in the City of New Orleans and it is full of books and publications about sugar. Dr. Lyon told us that when he became Director of the Experiment Station in the early nineteen hundreds the Station Library consisted of one or two shelves of books. The old gentleman was very proud of the present institution which contains one of the most complete collections of literature pertaining to sugar in the world. Incidentally, *The Sugar Bulletin* was there and this was very gratifying.

Another collection at the Station that amazed us was the bugs—dead, of course. The Station entomologists are now in the process of transferring their vast collection of insects from Schmett-type boxes to museum cases, which doesn't mean much to most of us laymen, but which will greatly facilitate the work of the entomologists in identifying and eradicating any new insect pests that may invade the islands. In Hawaii insects are controlled by parasites and knowing quickly what bug eats what bug is very vital to the economy.

The Hawaiian Sugar Experiment Station maintains field stations on all of the islands, but the Honolulu headquarters is the nerve center of the system and we are very grateful for the opportunity afforded us to visit it, and to meet D. Humbert and his co-workers. Dr. T. D. Baver, Director of the Station, was visiting the Mainland and we did not see him.

### The Ewa Plantation

On the Island of Oahu it rains a lot on the windward side and not much on the leeward side. Black clouds, that at home would have caused us to run for cover, hung over the mountains immediately back of our "Tripler" quarters most of the time. Out in front, however, the sun was shining on Pearl Harbor and the beaches, and on the fields of the Ewa Plantation.

The Ewa (pronounced "ever") is a wonderful place to visit. It is less than an hour's drive from downtown Honolulu; just 18 miles, in fact. This is an irrigated plantation. Water is available in large quantities but to get it to the right places at the right time takes a little doing. The April 1, 1957 edition of the "Ewa Hurri-Cane" says "In the hot summer months, the growing cane needs irrigation every 10 days, and at least half the plantation—4,300 to 4,500 acres — must be irrigated every week. It takes a lot of water to cover this area, as much as 120 to 130 million gallons per day. The water is lifted an average of 99 feet

by 30 pumps drawing from 56 artisian and six surface wells and 4 shaft and tunnel systems. *For each pound of sugar produced one ton of irrigation water is used.*"

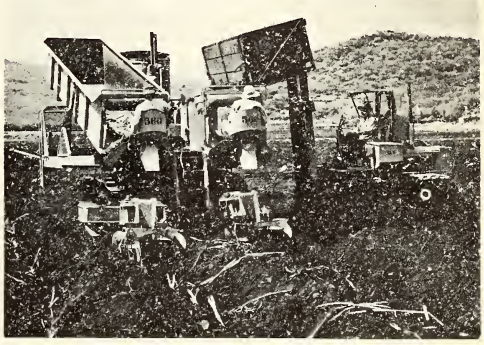
Fertilizer is added to the irrigation water and a field may take as much as 500 pounds of nitrogen and 600 pounds of potash per acre during the two year growing period. When harvest time for a field approaches, the fertilizer and the water are withheld and the canes stop growing and become ripe. It is as simple as that.

We wanted to know how the ripening process was handled in the rainy sections and were told by Mr. Bryan, as we drove around in his telephone-equipped station wagon, that the ripening process is controlled fairly accurately by stopping the fertilizer applications at the proper time. On the Big Island of Hawaii there are places where the average rainfall is better than 350 inches and 12 inches of rain in 24 hours is taken in stride by the natives.

The beauty of visiting a sugar plantation in Hawaii is that all phases of field operations are happening at the same time. We saw fields being plowed, planted, sprayed for weed control, irrigated, fertilized and harvested all on the same day. To see the same operations in Louisiana would take a year. We were especially intrigued by the planting and harvesting operations.

### Planting

In Louisiana our mechanical experts, and we have some good ones, have been struggling for years to develop a satisfactory cane planting machine. The one pictured here working at Ewa will plant 15 acres a day without any strain. The operation consists of first hand-cutting the canes into sections about a foot long. These seed pieces are dumped from the container on the tractor lift (number 16 in the picture) into the bin of the planting machine. The planting machine has two bins and plants two furrows (rows to us) as it moves through the field. Actually all the planter appears to do is break the soil and drop the seed pieces out of the hoppers. As will be seen in the picture, no attempt is made to cover the freshly planted cane. Mr. Bryan told us that the dirt gradually drops



down over the cane, aided by the irrigation water.

### Harvesting

The harvesting machine used on Ewa is called a "pushrake". The casual observer would swear that all this machine does is "bulldoze" its way through the fields tearing up cane by the roots and shoving it into big piles of twisted, broken stalks. Actually, the machine does a fairly clean job. It has sharp V-shaped knives that cut the cane close to the ground and the fact that several stubble crops are grown is proof that not many canes are pulled up by the roots. We understand, however, that some gaps have to be replanted.

Usually the cane to be harvested is "burned" to remove the leaves and trash before harvesting but it rained the night before our visit and the cane being harvested had not been burned. What we saw was this big pushrake ramming into the cane and piling it twenty or thirty feet from the start of the run. A big crane was busy picking up the cane and loading it on the tractor-

(Continued on next page)

trailer pictured here that weighs 25 tons empty and carries a pay load of 30 tons. This machine is known as a "Tournahauler". It is made by the R. G. LeTourneau Co.; costs about $40,000 dollars (Ewa has eleven) and it, of course, runs right into the fields to be loaded. A flexible wire net forms a cradle in the trailer. When the load arrives at the

mill a crane hooks into a bar to which the netting is attached and the cane is spilled out in the proper place. It takes practically no time at all to dump the thirty ton load of cane.

### Cleaning

The cane is very dirty and full of trash when it is dumped from the trucks onto the carrier so it goes through a cleaning process. First it is placed on a conveyor that untangles it, and allows large rocks, pieces of airplanes, and stuff like that to drop into a rock conveyor below. Then it goes through a mud bath.

This mud bath had us wondering for a while but it seems that the cane will definitely float on this mixture while the small rocks, iron and other heavy objects sink to the bottom.

### Television

Naturally the canes come out of the mud bath fairly muddy, but this washes off without much trouble on the "cascade conveyor" and the clean cane then goes through combing rolls and trash extractors. The operator of this cleaning process cannot see all the various stations from his control tower so he watches the last stage on television!

From this point on the sugar making process at Ewa is about the same as that used in Louisiana. The mill is as clean as a pin, and we felt more or less at home—after we passed the television set!

What makes the Hawaiian sugar industry tick? The answer to us seems very simple. It is an ideal climate plus organization. Nature has supplied the year around warmth and sunshine, and abundant water that sugarcane loves, and the Hawaiian sugar people have supplied the organization.

Hawaii produces over a million tons of sugar a year from a harvest of roughly 100,000 acres of cane, which is all the proof we need to believe that both man and nature are doing a very fine job.

Note—All pictures from the April 1st issue of the *Ewa Hurri-Cane*.

PUSHRAKE AT WORK

# CONTACT COMMITTEE MEETING

THURSDAY, JUNE 20TH
9:30 a. m. - 4:00 p. m.

U.S.D.A. HOUMA STATION
Houma, La.

## PROGRAM

*Agronomy:* Report on outfield work by R. J. Matherne, with Dr. T. J. Stafford of L.S.U.

Selection procedures in seedling nurseries
Maturity studies
Variety census for 1957
} by Leo P. Hebert

*Entomology:* Release and recovery of Cuban and Amazon flies in 1956 by Leon J. Charpentier

The sugarcane beetle and its control by Ralph Mathes

*Pathology:* Progress report on study of stunting disease by C. A. Schexnayder

*Physiology:* Physiology studies, including effects of gibberellic acid on cane growth by R. E. Coleman

*Fertility:* Soil and fertility studies in 1956 by L. G. Davidson

*Engineering:* Progress report on sugarcane harvester and planter by R. M. Ramp

*Seedlings:* Seedling work in 1956-57 by E. V. Abbott

*EVERYONE IS INVITED TO ATTEND*

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## IN WASHINGTON

(Continued from page 261)

those bodies. In the event of an irreconcilable difference with respect to any matter solely within the jurisdiction of The Sugar Association it would be necessary to decide such matter by the votes of the Directors of The Sugar Association only. Fortunately, no such situation has arisen thus far. Joint meetings of the Boards of Directors are usually held quarterly.

"The Directors of the corporations elect Executive Committees pursuant to By-Laws, and such Committees have the powers delegated to them by such By-Laws. The Executive Committees usually meet in joint session in each month in which the Boards of Directors do not meet.

"The Directors, pursuant to the By-Laws, may appoint other committees, which shall exercise such powers as may be conferred upon them by the Board of Directors."

Joseph F. Abbott, who recently announced his retirement as Chairman of the Board of American Sugar Refining Corporation was presented an illuminated testimonial pursuant to the following resolution unanimously adopted by the Board of Directors of Sugar Association, Inc.,

"Whereas Joseph F. Abbott, one of the founders and first President of Sugar Research Foundation, Inc., has retired from a career rich in honors and achievement, this Board desires to record its appreciation of his unceasing service and contributions to our industry over a period of thirty-eight years.

"From their earliest origins, this corporation and its affiliates have been the beneficiaries of his leadership, energy and vision. The basic policies which are the corner-stone of our continuity perpetuate the wisdom of his foresight and judgment.

"In retiring he carries with him the affection and esteem of all his associates and their earnest wish

that he may enjoy to the full the years ahead.

"RESOLVED, therefore, that this Board attest to the signal talents and the devotion of Joseph F. Abbott to the sugar industry and to this enterprise by the unanimous adoption of this minute and its entry in the record of this meeting."

———o———

## IN THE FIELD

(Continued from page 260)

(4) that C. P. 51-24 and C. P. 53-18, both showing good sugar and good yield, but both having some lodging tendencies be transferred to 51 Secondary Increase Stations. These decisions are subject to the approval of the Contact Committee.

Come out on Thursday, June 20, 9:30 A.M. to hear more about new varieties and all other phases of sugar cane research. The meeting will be at the Houma Station. Give one day of your time to these men who work for you all the year.

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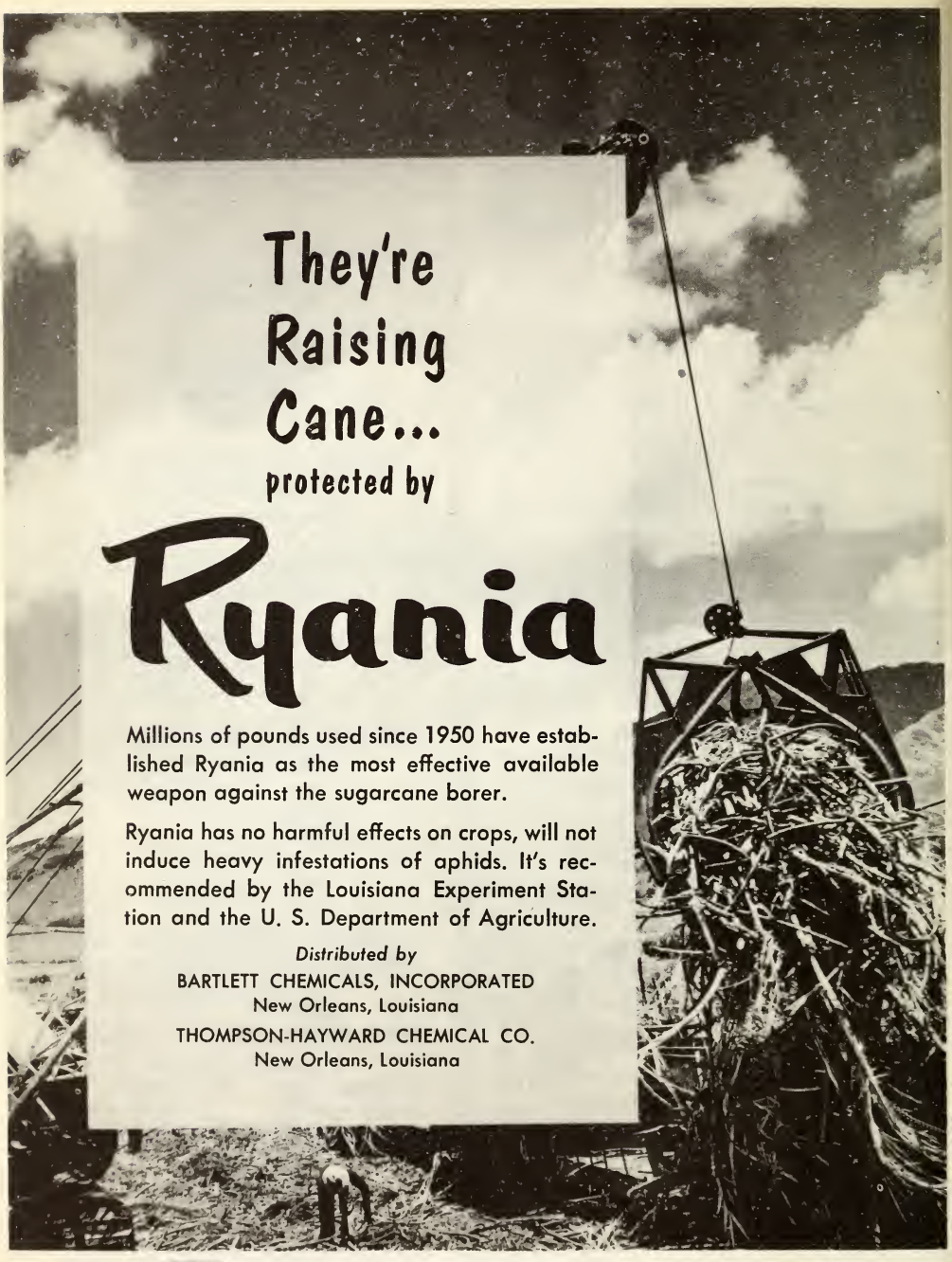
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# THE SUGAR BULLETIN

. 35 — No. 19 JULY 1, 1957

*cial Bulletin of the American Sugar Cane League of the U. S. A.*

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Published on the First and Fifteenth of each month
in the interests of the Domestic Sugar Cane Industry

THE
# SUGAR BULLETIN

414 Whitney Bldg., New Orleans 12

Gilbert J. Durbin, Editor — Andrew W. Dykers, Managing Editor

Lloyd L. Lauden, Agronomist and Field Representative

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# UP FRONT WITH THE LEAGUE

*by A. W. Dykers*

### Acreage Hearing July 9th

The Sugar Division of the U.S. D.A. has announced that the Proportionate Shares Acreage Hearing will be held in New Orleans on Tuesday, July 9, 1957. The meeting place will be the Auditorium of the International House which is located at 607 Gravier St. We have just learned that Mr. Lawrence Myers, Head of the Sugar Division, will be present at the meeting.

The Acreage Hearing is held each year by the Sugar Division to obtain testimony to help in the yearly decision that must be made regarding cane acreage restriction. It is a very important hearing because acreage restrictions effect every cane farmer and every mill operator in both Louisiana and Florida, as well as the general public.

Everyone whose interest is involved should plan to attend the Hearing. The starting time will be about 9:30 in the morning.

### Wage-Price August 7th

August 7th has been picked as the date of the Wage-Price Hearing this year. The place will probably be the Court Room in the City Hall, Thibodaux, La., but this is not definite as yet. We will probably have the official notice of this meeting in time for our next issue.

We suggest that you put a ring around August 7th on your calendar and plan to attend the Wage-Price Hearing, too.

The Head of the Sugar Division, Mr. Lawrence Myers, may also be able to attend this meeting, but it is a little early as yet to say for sure that he will. We imagine that 9:30 A.M. is about the time that the Wage-Price Hearing will start.

### Marketing Restrictions Lifted

Joe Ferris says in his report on page 277 that the Sugar Division has been trying desperately of late to curb the price of sugar and outlines the steps that have been taken by the Division since the first of the month.

Joe's report was written before the Sugar Division removed the 10% marketing restrictions on Louisiana and Florida producers, thus allowing the domestic cane areas the same full marketing allotment privileges previously granted to offshore areas.

Effective June 26th the Louisiana and Florida producers are allowed to sell 100% of their marketing allotments and not up to 90% as heretofore. Marketwise this, like the other recent moves, probably means nothing but the Sugar Division gets credit for another try.

### More Than Half

Dr. Leo Hebert, who ought to know, says that more than half of Louisiana's sugar cane crop is planted to one variety, C. P. 44-101. This cane was released by the American Sugar Cane League, L.S.U., and the U.S.D.A. in 1949.

In his weekly news report, Gilbert J. Durbin, General Manager of the League, warns that C. P. 44-101 is

(Continued on page 279)

# IN THE FIELD WITH LLOYD LAUDEN

*by Lloyd L. Lauden*

## Field Day

Mr. Vick Calandro, County Agent of St. John Parish, and Mr. Stanley Cruthirds, Assistant Agent of St. John Parish, together with the farmers of the parish, held their Seventh Annual Farmers' Field day on June 26. In addition to a well planned, informative program, the day included a very fine barbecue.

Other parishes will soon be holding their annual field tours. Farmers throughout the belt should make a special effort to attend at least one parish field day. Some farmers attend several.

County agents spend considerable time and effort promoting and arranging for these events. They usually invite specialists from L.S.U. and the U.S.D.A. to participate in the program. Where a tour is included in the program, the specialists usually discuss the research pertaining to the demonstration being shown. Not only can farmers hear about some of the experimental work being conducted but they can see the results in demonstration plots.

The field days and tours have done much to help prove to farmers the value of research. Good demonstrations are very useful in promoting the use of any new thing. A good demonstration of a scientifically proven farming practice is no exception; seeing is believing.

One of the outstanding features used each year on many of the field tours is the chemical weed control demonstration. Usually, Mr. Ernest Stamper, the weed control expert of L.S.U., shows the results of different chemicals on the control of weeds. As new chemicals become available, Mr. Stamper includes them in his plots. Often farmers have an opportunity to see the results of a new chemical before the chemical is on the market. Parish field days have certainly played an important role in the overall general farmer acceptance of the chemical weed control program.

Many other interesting and outstanding demonstrations are shown. The difference in height and size of heat treated cane as compared to field-run cane is a very convincing demonstration. When a farmer sees more stalks, larger barrels, and taller canes in a treated plot as compared to another plot where field-run seed of the same variety was used, he immediately wants some heat treated seed.

The field day serves another most useful purpose that cannot be overlooked. Farmers from all over the parish meet and discuss the crop. This is always healthy for any industry. Many good ideas are swapped.

Attend the field days. Go out to learn and give the County Agents a big hand. They are dedicated to their work and they do a mighty big job.

# IN WASHINGTON WITH JOE FERRIS

*by Josiah Ferris*

Despite the unprecedented heat wave which has brought Washington daily temperatures in the middle 90's, U.S.D.A. Sugar Division Director, Lawrence Myers and his assistants have been exceedingly active in what appears to be an all out but ineffective effort to lower the price of sugar.

Declaration of the Puerto Rican deficit of 150,000 tons and reallocation of that amount to other domestic areas and Cuba, failed to have any affect whatsoever on the market. The next play was to increase the estimate of domestic sugar requirements by 100,000 tons. This action according to the U. S. Department of Agriculture Press Release of June 12th was taken to offset recent increases in prices of raw sugar. Again the government's action was of no avail and prices continued their moderate advance, whereupon the department on June 14th lifted restrictions imposed at the beginning of the year on the estimate to which offshore sugar quotas could be filled prior to November 1, 1957. The removal of that restriction permitted any offshore quotas to be filled completely at any time that it was commercially feasible to do so.

In explaining its action the government Press Release stated:— "In recent weeks prices for offshore raw sugar have been rising markedly without either bringing forth supplies consistent with the interests of consumers or contributing generally, to the welfare of the domestic sugar industry. Accordingly, it is desirable to permit sellers to offer their supplies within the quotas currently in effect without limitation on the time of delivery. This amendment in the order permits importation of the full amount of current quotas at any time. As a result of this amendment, any subsequent reduction in quotas for offshore foreign and domestic areas will be effective only to the extent that the respective quotas remain unfilled on the effective date of such reduction. This action does not affect the allotment orders applicable to the mainland cane and beet areas.

"The restrictions lifted today involve the following countries and quantities: Cuba, 100,000 tons; Dominican Republic, Mexico, and Peru, 16,000 tons each; and Hawaii, 50,000 tons. Puerto Rico is not affected because of a deficit, and the Domestic Beet and Mainland Cane areas because of allotments."

Many observers feel that the government is making a great to do about nothing. They point out that even at the current price of 9.25¢ for cane refined and 6.55¢ for raw sugar, duty paid, the price is considerably below the level in the formula written into the Act by Congress. They further point out that the price of sugar is less than the price of many other agriculture commodities. When asked to comment on this situation, one Washington sugar representative who had just returned from a baseball game summed it up this way—"the government's sugar team made no hits, no runs and two errors"!

# SUGAR QUOTA INCREASED TO 9,100,000 TONS

*(Official Release)*

On June 12, 1957 the U. S. Department of Agriculture announced that the estimate of domestic sugar requirements (total quotas) was being raised from 9 million tons to 9.1 million tons.

The Department stated that this action was being taken to offset the recent increases in prices of offshore raw sugar which have taken place without corresponding benefits to the majority of domestic growers. Distribution of beet sugar so far this year has been disproportionately low in comparison with total sugar distribution and with the beet sugar quota.

The full statement of the bases and considerations for this action follows:

"*Requirements.* On January 11, 1957, requirements (total quotas) were established for 1957 at 9 million tons, the same level that had been established under the final determination for 1956. In 1956 the entire 9 million tons were charged to quotas (marketed) and distribution into consumption channels amounted to 8.9 million tons. Since distribution through May 31 this year is 160,000 tons below that for the corresponding period last year, it appears that the 9 million-ton supply previously made available for this year should have been adequate.

"In recent weeks holders of offshore supplies of cane sugar appear to have been reluctant sellers, except on rising prices. To date this year the domestic beet industry has supplied only about 20 percent of the total quantity distributed, whereas the quota for the domestic beet industry has amounted to 22.4 percent of the requirements total. If the distribution of beet sugar continues to fall behind total distribution to the extent that it has for the year to date, it will fail by around 200,000 tons to fill the beet sugar quota previously established.

"Although large supplies of mainland cane sugar, as well as beet sugar, will be marketed after the fall harvest begins, such supplies will not be available in significant amounts to the Northeast.

"Distribution in any area accomplished late in the year either through actual deliveries or constructive deliveries is of little value in satisfying the requirements of consumers this year but is of primary concern with respect to requirements for next year. Accordingly, to the extent that quota supplies fail to reach consumers in time or in areas that will satisfy the needs of consumers this year, additional quota supplies are required.

"Beet sugar has recently been selling in the Chicago market at the same price that prevailed in January and February 1956, although the New York duty paid price of raw sugar subsequently has risen from 5.88 to 6.55 cents per pound and the New York price of refined cane sugar has risen from 8.65 cents per pound to 9.10. Accordingly, the recent tighter supplies and higher prices for raw cane sugar have been largely without purpose from the standpoint of maintaining and protecting the domestic sugar industry."

The new quotas and quantities that may be brought in for direct consumption are shown in the following table. Other restrictions remain as stated in the original determination.

| Area and country | Prorations of deficit | Quotas Adjusted for proration of deficit | Direct-consumption limits |
|---|---|---|---|
| | | (Short tons, raw value) | |
| Domestic beet sugar | 65,928 | 2,042,262 | no limit |
| Mainland cane sugar | 20,287 | 628,424 | no limit |
| Hawaii | 36,795 | 1,139,783 | 31,051 |
| Puerto Rico | (163,061) | 990,253 1/ | 134,589 |
| Virgin Islands | | 15,727 | 00 |
| Republic of the Philippines | | 980,000 | 59,920 |
| Cuba | 40,051 | 3,070,936 | 375,000 |
| Peru | | 82,537 | 9,694 |
| Dominican Republic | | 66,607 | 8,642 |
| Mexico | | 49,509 | 15,697 |
| Nicaragua | | 12,306 | 10,351 |
| Haiti | | 6,388 | 6,179 |
| Netherlands | | 3,522 | 3,453 |
| China | | 3,445 | 3,386 |
| Panama | | 3,445 | 3,386 |
| Costa Rica | | 3,440 | 3,381 |
| Canada | | 631 | 631 |
| United Kingdom | | 516 | 516 |
| Belgium | | 182 | 182 |
| British Guiana | | 84 | 84 |
| Hong Kong | | 3 | 3 |
| All other countries | | 0 | |
| Total | --- | 9,100,000 | |

[1] Despite declaration of a deficit, the full quota of 1,153,314 short tons, raw value, is available to Puerto Rico.

## UP FRONT

(Continued from page 275)

susceptible to the Stunting Disease and says that unless farmers heat treat their seed this variety, like other good canes that we have had, will finally pass out of the picture. On the other hand, if the cane is heat treated C. P. 44-101 should keep on making high yields "until" Mr. Durbin says, "farmers are ready to discard it for a better variety."

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# THE SUGAR BULLETIN

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Published on the First and Fifteenth of each month
in the interests of the Domestic Sugar Cane Industry

THE
# SUGAR BULLETIN

414 Whitney Bldg., New Orleans 12

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Lloyd L. Lauden, Agronomist and Field Representative

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# UP FRONT WITH THE LEAGUE

*by A. W. Dykers*

### Acreage Hearing Held

The Acreage Allotment Hearing was held as scheduled, in the Auditorium of the International House in New Orleans on July 9th. About 150 people attended the Hearing which began at ten in the morning and was over in time for lunch.

Contrary to advanced publicity, Mr. Lawrence Myers did not attend the Hearing. At the last minute the Head of the Sugar Division, who is a very busy individual, was forced to remain in Washington to appear before the Senate Foreign Relations Committee relative to the International Sugar Agreement.

Mr. Myers' very able first assistant, Deputy Director Thomas H. Allen, attended the Hearing and did his usual fine job, both officially and unofficially, as did Messrs. Ole Homstad and William Alewine, the other Government men from Washington.

There was a time when these acreage hearings produced a lot of fireworks, but the one on the 9th was strictly routine. The meeting began with Mr. Homstad reading the statement of the Sugar Division which we are printing beginning on page 286 of this issue. Next W. S. Chadwick, Chairman of the Proportionate Shares Committee of the American Sugar Cane League, read the industry's recommendations which are also in this issue beginning on page 287. Mr. Allen asked a few questions for the Government to clarify the record and then James Graugnard took the stand and endorsed for the Farm Bureau, the recommendations made by Mr. Chadwick. Mr. Allen again asked a few questions. Mr. Forest P. Tralles, General Counsel for the United States Sugar Corporation, of Florida, spoke from the floor and also endorsed, without reservations, the recommendations made by Mr. Chadwick. This made the approval unanimous.

### Quotas Increased Again

After the close of the market on July 5th the Sugar Division announced another increase in sugar quotas. This one was for 200,000 tons and brought the total 1957 quota figure to 9,300,000 tons. It was another "price control" increase. The additional sugar, admittedly, was not needed to meet consumption requirements. The New York price of raw sugar dropped from $6.60 to $6.50 a hundred pounds over the July 6th weekend. Today, July 12th, the New York spot quotation is $6.55.

### Wage-Price Hearing August 7th

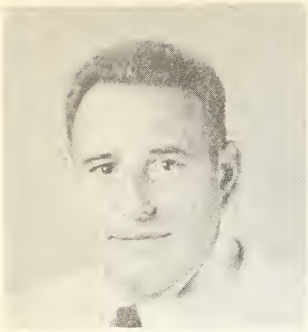
The U.S.D.A. has issued the following press release relative to this year's Wage-Price Hearing.

"A public hearing will be held on Louisiana sugarcane wages and prices in the City Hall auditorium at Thibodaux, La., August 7, 1957 at 10 a.m.

Testimony will be received on (1) fair and reasonable wage rates for workers in Louisiana employed in harvesting 1957 crop sugarcane, and in producing and cultivating sugarcane during 1958, and (2) fair prices for 1957 crop sugarcane.

One condition producers must

(Continued on page 292)



# IN THE FIELD WITH LLOYD LAUDEN

*by Lloyd L. Lauden*

## Planting Time Coming

Farmers should begin making plans now for the planting season, particularly if summer planting is to be done. Much planning is necessary and many things have to be considered.

Some of the increase in yield of cane per acre over the past few years has been the result of good stands of cane. Good stands are absolutely necessary to attain top yields in any variety. It is therefore very important that the planting operation be considered the most important operation on the farm.

Although the statement "prepare a good seed bed" sounds story bookish, a well pulverized bed that has been allowed to settle and firm is excellent insurance. Rows should be all the same width and straight if possible. This will minimize cultivation damage in the spring. Rows should not be opened for planting too far in advance of planting. The loss of moisture at this time can adversely affect stands. Cane should be covered as soon after planting as possible for the same reason.

Select good cane, from fields free of Johnson grass, for seed. After a good fallow plow program has been followed do not make the mistake of replanting Johnson grass seed. The chemical weed control program is a good one. If weeds are a problem, use the recommended treatment after planting.

Give careful consideration to varieties to be used. Plant the varieties that have produced the most sugar per acre. Yield tests conducted by L. S. U. and the U. S. D. A. over a number of years prove that certain varieties do better in some areas than in other areas. These tests also prove that certain varieties yield better than other varieties on heavy soils. Check with the County Agent to be sure of the recommended varieties. He works very closely with the men conducting the yield tests.

Do not try to "stretch" seed. Plant cane stalks, not leaves. Check the topping of seed often, particularly when moving from field to field or from one variety to another. Stay with the planting crews at the beginning of the season and double check frequently to see that the proper amount of seed is being planted. The planting operation should be carefully supervised.

Poor stands are more frequently found on heavy soils. Experiments have proved that the application of chlordane at the time of planting will improve stands on the heavy soils. The tests show that one application of chlordane at the time of planting will give an average yield increase of about two and one-half tons per acre in plant cane and another two and one-half tons in first year stubble. The cost of the material plus the application amount to about $4.50 an acre. A five ton increase in yield over the two years will more than pay the cost involved. Many farmers are now using chlordane as a standard practice

(Continued on page 293)

# IN WASHINGTON WITH JOE FERRIS

*by Josiah Ferris*

The following statement was issued in Washington, D. C., on July 15, 1957 by: Harry Clark, Sugar Beet grower of Ault, Colorado, and Chairman of the American Sugar Beet Industry Policy Committee, which represents the Nation's sugar beet growers and beet sugar processing companies. He issued the statement in behalf of the committee, himself, and four vice chairmen —Richard W. Blake, Greeley, Colorado, Executive Secretary, National Beet Growers Federation; Frank A. Kemp, Denver, Colorado, President, The Great Western Sugar Company; Gordon Lyons, Stockston, California, Executive Manager, California Beet Growers Association, Ltd., and Robert H. Shields, Washington, D. C., President and General Counsel, United States Beet Sugar Association.

### The Statement

"Just about everybody in the sugar business recognizes that a tug of war is going on with respect to the price level of foreign and domestic offshore raw sugar supplies for the United States market. Various forces and groups, domestic and foreign, are involved. In recently published statements concerning this situation the United States beet sugar industry — a bystander in this contest—and the American Government's sugar program have both been accused of being at fault.

"Specifically, it has been charged that the 1956 amendments to the Sugar Act and the increased beet sugar marketing quotas resulting from those amendments are responsible for the level of refined sugar prices in Northeastern States. It has been alleged that a shortage of sugar exists in that region. The beet sugar industry has been accused of not providing its full share of consumers' needs and, by inference, of not having the ability to produce or market its full share. Such charges and inferences are utterly without foundation. Here are the facts:

### The Northeast Situation

"The level of refined sugar prices in the Northeast is basically the result of two factors, both obviously beyond the control of the beet sugar industry. One is the cost of raw cane sugar to Eastern cane refiners, and the other is the cane refiners' margin or 'spread' between what they pay for raw sugar and the price they charge for refined sugar.

"Today's raw sugar prices are the direct result of (a) the fact that nearly all raw sugar supplies in offshore areas are in the hands of a few strong sellers, (b) the effect on the U. S. market of higher prices for raw sugar elsewhere in the world, and (c) the buying practices of raw cane sugar purchasers."

"There is no shortage of raw

(Continued on page 291)

# USDA PROPOSAL ON PROPORTIONATE SHARES FOR 1958 CROP

*(Read At Hearing Held In New Orleans On July 9, 1957)*

The press release of June 24, announcing this hearing, contains statements on the purpose of the hearing, the apparent need for continuing restrictions on sugarcane acreage in the Mainland Sugarcane Area, and a proposal for the 1958 proportionate share program.

Before discussing the Department's proposal for the 1958 program, we believe that it would be helpful to review briefly the present sugar statistical situation for the Mainland Sugarcane Area.

The effective inventory on January 1, 1957, was approximately 339,000 tons of sugar. Present indications point to about 290,000 acres to be harvested for sugar and seed and classified as bona fide abandonment (planted acreage) for the 1957 crop. During the five-year period, 1952-56, the average annual increase in sugar yields per planted acre has been about 6.0 percent. If this increase in yields pertains for the 1957 crop, 2.304 tons of sugar will be realized as an average per planted acre. The resultant 1957 crop would approximate 668,000 tons of sugar. On the basis of the above effective inventory, acreage and yield assumptions, sugar supplies would total slightly over one million tons (1,007,000). Assuming that 1957 marketings will equal the current quota of 646,541 tons of sugar, the effective inventory on January 1, 1958, will be about 361,000 tons. This would represent an increase of approximately 22,000 tons over that of January 1, 1957, and would be about 69,000 tons above the average effective inventory for the five-year period 1952-56. However, such inventory would be somewhat smaller than the inventories carried at the beginning of 1955 and 1956. Accordingly, restrictions on the 1958 crop appear necessary to prevent an accumulation of stocks greater than those needed to fill quota and carry-over requirements.

To provide a basis for discussion at this hearing, the Department's press release of June 24 contained the following proposal for the 1958 crop:

1. Generally, the 1957-crop proportionate shares would become the farms' 1958 farm bases. Pro rata adjustments would be made for farms with 1958 bases of more than 25 acres by applying a factor as required to attain the 1958 acreage objective.

2. A five-acre minimum would be established for any farm.

3. For any farm without production during the base period or in years since the base period (a new farm), the proportionate share would be five acres.

4. Provisions similar to those contained in the 1957-crop determination with respect to appeals and the protection of share tenants and sharecroppers would be continued for the 1958 crop.

5. Provision would be made for the exclusion from proportionate shares of any sugarcane acreages marketed or processed for the production of sugar for livestock feed, or for the production of livestock feed, as authorized by Section 301 (b) of the Sugar Act. Safeguards similar to those now effective would be provided to assure the use of such sugar for these purposes.

6. Provisions similar to those included in the 1957-crop determination would be made for dividing the planted acreage record for farms which are subdivided for 1958.

7. Special provisions would be included for the Northern Louisiana Area (the Meeker Area) similar to those for 1957.

(Continued on page 293)

# TESTIMONY OF WILLIAM S. CHADWICK AT THE 1958 PROPORTIONATE SHARE HEARING

*(Held In New Orleans On July 9, 1957)*

My name is William S. Chadwick. I reside at New Orleans, Louisiana. I am associated with Southdown Sugars, Inc., a grower and processor of sugar cane operating in the State of Louisiana, in the Mainland Cane Sugar Area. I appear at this informal public hearing on behalf of the American Sugar Cane League of the U.S.A., Inc., a non-profit corporation of the State of Louisiana, created for the purpose of protecting and promoting the welfare of the Louisiana sugar cane producers and processors. In addition to its processor members, this organization is composed of sugar cane growers who produce more than 95% of the sugar cane grown in Louisiana for the production of sugar.

I am Chairman of a special committee of the American Sugar Cane League composed of thirteen (13) Louisiana producers. This committee was appointed prior to the informal public hearing held on June 24 ,1953, with respect to the 1954 Proportionate Share Determination, and reappointed in 1954, 1955, 1956 and again this year.

Our committee has given thorough consideration to the establishment of proportionate shares for the 1958 crop in the Mainland Cane Sugar Area. The proposal of the Department contained in its June 24, 1957 announcement of this informal public hearing has been considered in detail.

The first problem for determination is the 1958 acreage objective. With few exceptions, the mainland producers are completely dependent on revenue derived from sugar cane and, therefore, the total number of acres of sugar cane which may be produced into sugar is at all times of foremost importance to us.

In our deliberations we have constantly had in mind that the sugar cane producer must produce the largest possible quantity of sugar cane, bearing in mind the limits of quota restrictions on the marketing of sugar. At the same time we have also kept in mind, with equal weight, that the processor cannot carry inventories of sugar which are unreasonably large. A number of us are in the dual position of producer and processor.

Considering present crop prospects, anticipated yields and the quota for the area as it exists today, it appears that the 1957 year end inventory will result in a very heavy but not completely unbearable burden on the processors. If 1958 proportionate shares are at the same level as 1957 proportionate shares, and assuming the existence of all other factors and conditions substantially as they exist today, it is reasonable to assume that the 1958 year end inventory would approximate the 1957 year end inventory.

Based on present crop prospects and anticipated yields, and assuming the Mainland Cane Sugar Quota is not further increased, we recommend that the 1958 acreage objective be the same as the 1957 acreage objective. Certainly there should be no decrease. *In the event of any change in conditions which would indicate that a larger acreage objective is justified, whether such change took place before or after the issuance of the 1958 Determination, we urge that the question be reopened, that the acreage objective be again evaluated, and that the proportionate shares be adjusted upward in accord with any increase in the acreage objective.*

This recommendation does not mean there should be any delay in

(Continued on next page)

issuing the proportionate share determination. It merely means that the acreage objective, as originally determined, should not be final, but subject to review if any change in conditions justify an upward revision. We desire to point out that such increase could be taken advantage of by the producers for a number of months in the future, even during the early months of the calendar year 1958.

In establishing proportionate shares for the individual farms we concur generally with the proposal contained in the June 24, 1957 announcement made by the Department, with the exceptions, additions and qualifications which I shall mention.

1. We concur in the proposal that the individual farm proportionate shares which were effective for the 1957 crop generally become the farm bases for the 1958 crop. With the 1958 acreage objective the same as in 1957, there would be no adjustment in the bases, and the bases would become the 1958 proportionate shares.

If conditions subsequently justify an increase in the 1958 acreage objective, pro rata adjustments would be made for farms with 1958 bases of more than twenty-five (25) acres by applying a factor required to attain such revised objective. In view of the fact that in prior determinations farms with bases of 25 acres or less were not adjusted downward, in the 1958 determination farms with bases of 25 acres or less should not be adjusted upwards except in the case of a farm which was reduced to 25 acres under the 1954 or 1955 determination. In such cases the proportionate shares would be increased by an amount sufficient to place such farms on a level relatively comparable with farms of more than 25 acres. Any farm which was reduced to 25 acres under the 1956 determination, was placed in its proper relative position under the 1957 determination.

We also recommend that the determination contain a provision similar in substance to that portion of paragraph 855.3(a)(1) of the 1956 determination which fixed the base of a farm on which the acreage in the prior year was less than 80% of the proportionate share, at the larger of five acres, or 125% of such prior year's acreage. A similar provision was not included in the 1957 determination but we feel it is justified and advisable in 1958. However, the clause in the 1956 provision which expected therefrom those farms whose deficiency of more than 80% resulted from drought, flood, storm, freeze, disease or insect, as determined by the appropriate County Committee, should be broadened to include any cause beyond the producer's control as determined by the appropriate County Committee.

In establishing proportionate shares for 1958, we can think of no alternative method which would be as equitable and as efficient as the one proposed by the Department and recommended by us. We particularly would object to the alternate method suggested by the Department in its announcement of June 24, 1957.

2. We concur in the proposal that a minimum proportionate share of five acres be established for any farm.

3. We concur in the proposal that the proportionate share for any new farm should be five acres.

4. We concur in the proposal that provisions similar to those contained in the 1957 crop determination with respect to appeals and the protection of share tenants and share croppers should be continued for the 1958 crop.

5. The language of paragraph 5 of the Department's proposal is not completely clear to our Committee. We assume this proposal refers to a provision similar to paragraph (b)(1) of the 1957 determination, as amended, which relates in part to the marketing or processing of excess proportionate share sugar

cane for the extraction of sugar for livestock feed or the production of livestock feed. If this assumption is correct, we agree that a provision to this effect should be included in the 1958 determination.

We recommend a provision similar to the provision contained in the 1957 determination, as amended, except that to do complete justice and avoid any inequitable penalty on any producer who is in good faith, there should be added a provision to the effect that if sugar cane in excess of the proportionate share is marketed or processed, without any prior evidence or indication that it was marketed or processed for livestock feed or for the production of livestock feed, the producer there of shall be deemed to be in compliance with the farm proportionate share to the extent of his proportionate share provided he is able to establish through evidence satisfactory to the Secretary or his duly authorized represenative, that:

(a) The sugar cane from such excess proportionate share acreage was marketed or processed in error and with the bona fide belief that such sugar cane was produced from proportionate share acreage,
and

(b) The sugar produced from such sugar cane has been or will be used for livestock feed or for the production of livestock feed.

Although this informal hearing relates to the 1958 proportionate share determination, in order to correct as to 1956 and to avoid as to 1957 any inequitable penalty on a producer who inadvertently finds himself in the position I have indicated, we recommend that the 1956 determination and the 1957 determination each be now amended to include such a provision as I have recommended with respect to 1958.

6. Subject to the modification and addition which I shall recommend, we concur in the Department's proposal that provisions similar to those included in the 1957 determination be made for dividing the planted acreage record for farms which are subdivided for 1958. We refer particularly to the provisions of Section 855.4(a)(5).

The modification recommended relates to the last alternative method of dividing acreage under the 1957 determination. Under this method if the subdivision of a farm occurs after the planting of a crop, and if prior to the beginning of harvest all interested persons make such request to the County Committee in writing, the proportionate share for each subdivision shall be based on the measured proportionate share acreage on each subdivision. Although the other alternative methods of dividing proportionate share acreage are subject to approval of the County Committee, this method is not. It is recommended that the division of acreage under this method be made subject to the approval of the County Committee.

We recommend there be added a provision to this section, to be made applicable in any case where a 1957 farm division was determined under the alternative method I have just discussed. In any case where the 1957 proportionate share division was determined on the basis of the measured 1957 proportionate share acreage on each subdivision, it is recommended that in the absence of written objection by any interested party to the County Committee, the 1957 proportionate share for such subdivision, be the 1958 base; provided, however, if the 1958 proportionate share exceeds 75% of the available crop land on any farm established under the 1957 subdivision, the proportionate share be reduced to 75% of the available crop land; and provided, further, that the County Committee be au-

(Continued on next page)

thorized, when requested by all interested parties, to allow modifications in the proportionate share of each of the parts of the 1957 subdivision, including the utilization of any excess of 75% of available crop land which may have been lost by one part of the subdivision, all in order to permit the orderly movement of proportionate share acreage from and to any part of the original farm.

7. The Department has proposed that special provisions be included for the "Northern Louisiana Area" similar to those for 1957. We desire to point out that the Department has proposed, and we have recommended, that the 1957 proportionate shares become the farm bases for the 1958 crop. We are informed that the special provision contained in the 1957 determination made possible the alleviation in 1957 of the unusual conditions justifying such special treatment, and that the acreage on these farms as a whole has been restored to a level comparable to farms in the remainder of the state. Therefore, we assume this proposal relates only to Section 855.4(a)(6) of the 1957 determination which provides for the reallocation of unused acreage in the parishes of Avoyelles, St. Landry, and Rapides, Louisiana. With this assumption, we concur in the proposal, but desire to indicate that our recommendation is with respect to the 1958 determination, without any commitment as to subsequent years.

8. There is not included in the Department's proposal a provision similar to the one included in the 1957 determination under Section 855.4(a)(4), relative to the transfer of farm proportionate shares where land is removed from sugar cane production because of transfer by sale, lease or donation to any Federal, State or other agency or entity having the right of eminent domain. There is also not included in the Department's proposal a provision similar to the one included under Section 855.4(a)(9), relative to the effect of erroneous notice of proportionate shares. These provisions will be as essential in 1958 as they have been in the past, in order to prevent gross inequities under the special circumstances provided for. We strongly recommend the inclusion of similar provisions in the 1958 determination.

Generally, we also recommend, except as otherwise indicated in my testimony, that the 1958 determination be similar to the 1957 determination, as amended, in all of its provisions.

It is appropriate at this point to state that in some few isolated cases effort may be made to increase the proportionate share of a farm by improper use of the new farm provision of the determination. We know of no case where such effort has been successful in the past, and believe the Department under existing regulations has sufficient authority to prevent such practice. However, we direct the matter to the Department's attention, with the suggestion that if any remedial steps are deemed necessary, they be taken.

Finally, I desire to say to the Department of Agriculture that our committee and the Louisiana sugar cane producers represented by it, are sincerely appreciative of the splendid cooperation of the Sugar Division in solving or working toward the solution of the problems necessarily involved in establishing proportionate shares. The pre-hearing conferences in Louisiana in recent years with Mr. William Alewine and Mr. O. S. Homstad, whose duties in the Sugar Division relate particularly to proportionate shares, and both of whom we desire to highly commend, have been most pleasant and we are certain very fruitful to the producer and to the Department.

## IN WASHINGTON

(Continued from page 285)

sugar available for the Northeast. More raw sugar supplies are available this year to cane refiners than were available last year, with no indication that consumers are going to buy as much refined cane sugar as last year. The Sugar Act still permits refiners to refine and market in the Northeast as much of the total raw sugar supply as may be necessary to meet the needs of consumers in that area."

"All evidence points to the fact that there also is no shortage of refined sugar available to the Northeast. Eastern refined cane sugar is being shipped hundreds of miles Westward where abundant beet sugar supplies are available. Refined cane sugar is being freely offered in the Midwest at prices substantially below the basic Eastern Seaboard price plus freight."

"Beet sugar is being offered at less than Eastern cane prices as far East of the normal beet sugar sales area as Buffalo and Pittsburgh, but buyers there have so far shown little interest in the face of abundant offerings of cane sugar."

### Beet Sugar Marketing Ability

"Beet sugar marketing during the first six months of this year exceeded those for the same period last year by more than 80,000 tons. Cane sugar sellers, on the other hand, have marketed almost 120,000 tons less than at this time a year ago."

"Some of the most significant increases in beet sugar deliveries this year have been in the States on or just beyond the Eastern fringe of the industry's normal marketing territory. For example, most recent trade figures show that compared with 1956, beet sugar deliveries during the first five month in 1957 were up 144 per cent in Ohio, 130 per cent in Indiana, and 16 per cent in Illinois — in view of the heavy beet distribution in June these percentages no doubt will be significantly higher when the June figures are available."

"The Crop Report issued by the Department of Agriculture just last Wednesday indicates that sugar beet production this year, from 11 per cent more acres than last year, will be large enough to provide an all-time high quantity of beet sugar—2,150,000 to 2,200,000 tons of sugar, topping all previous production records by 150,000 to 200,000 tons. With adequate stocks on hand and the harvest of this huge crop to begin in a few weeks, the beet sugar industry's ability to market its full proportionate share of whatever volume of sugar consumers may need this year is at an all-time high."

"For the obvious purpose of affecting sugar prices in the Northeast, the Department of Agriculture has set total marketing quotas this year at an admittedly inflated figure of 9,300,000 tons. This is 500,000 tons higher than the Department's own estimate of actual consumption and distribution for the year. The beet sugar quota resulting from the Department's action is now 2,101,000 tons—about 150,000 tons greater than the record beet sugar quota and marketings of 1,955,000 tons in 1956."

"The 1956 amendments to the Sugar Act gave American sugar producers the opportunity to share with foreign suppliers in filling increases in sugar requirements of a growing nation. Part of the increased need for sugar arises because of the West's fast-growing population. It was both natural and imperative that this increase be supplied in considerable part by increased quotas to the beet sugar industry, which produces in the Midwest and West."

"There has been and is plenty of sugar available for every hamlet and every consumer in the United

(Continued on next page)

States, and there will continue to be ample supplies to meet all American demands. Thanks to the present Sugar Act, the average prices of sugar to U. S. consumers has resisted the upward pressure of prices to a much greater extent than have the prices of virtually all other food products. While there has been a moderate advance in the sugar price level, it has not advanced proportionately with living costs and is even below the level considered reasonable and fair as measured by the Labor Department's Consumers' Price Index, which the Sugar Act authorizes as a gauge. Because of the present Sugar Act, American consumers have been protected from the skyrocketing world sugar market, on which prices more than doubled in the last few months of 1956. Since last November, the world price has been above, much of the time substantially above, the United States price."

"The beet sugar inudstry's increased marketings and its prospective greater output for this year—both of which are direct results of the 1956 amendments to the Sugar Act—will continue to help give positive assurance of adequate supplies and reasonable prices for American sugar consumers."

The statement was given to newspaper men by Robert H. Shields, President and General Counsel of the U. S. Beet Sugar Association. Mr. Shields made it clear that where the statement referred to "cane sugar sellers" he was not referring to sugar producers in the mainland cane area. He also emphasized the fact that the Sugar Act had, as always, provided adequate protection for domestic sugar users.

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## UP FRONT

(Continued from page 283)

meet to qualify for payments under the Sugar Act is to pay all persons employed on the farm in producing, cultivating, or harvesting sugarcane wage rates not less than those determined as fair and reasonable by the Secretary of Agriculture after a public hearing and investigation. Another condition is that processors who are also producers must pay prices determined to be fair and reasonable for sugarcane purchased from other producers.

In order to obtain the best possible information, U.S.D.A. requests that all interested persons appear at the hearing to present their views and pertinent data. Information and recommendations are requested specifically on the pricing period for raw sugar and molasses, the absorption by the processor of the costs of hoisting and weighing sugarcane, the amount of transportation allowances which the processor shall pay to producers, and the price for salvage sugarcane."

### Howard Bond Dies

It is with sincere regret that we report the death of Howard Bond who died on July 8th, 1957 after a rather extended illness. Mr. Bond was 59 years old and had been a valued employee of the South Coast Corporation for the past 30 years. He began his career with South Coast when that Corporation was formed in 1927.

At the time of his death Mr. Bond was head of the Insurance Department of South Coast and was also in charge of personnel, labor relations, safety and welfare. He was probably best known throughout the Louisiana sugar industry for his work with labor, especially in negotiating for foreign laborers during harvest time. He was an expert in the labor recruiting field and took charge of this work for the industry as a member of the Labor Committee of the American Sugar Cane League.

### Sucrochemicals

The Colonial Sugars Company has

nnounced the formation of a Sucro-hemical Division to produce indus-rial chemicals using sugar as the major raw material.

A July 1st news release by *Sugar Information* states that a pilot plant has been constructed to manufacture sucrose esters and is now in oper-ation at the site of Colonial's sugar refinery at Gramercy, Louisiana. Samples of sucrose monostearate are being offered at the present time to interested firms for product development work, and other esters including sucrose monopalmitate, sucrose mono-oleate, sucrose mono-myristate and sucrose monolaurate will be available shortly.

———o———

## IN THE FIELD

(Continued from page 284)

on the heavy soil.

Chlordane is not recommended for light soil except in the area near Edgard, La., where wireworms have been a problem.

———o———

## USDA

(Continued from page 286)

Under item (1) of the proposal, the 1957-crop proportionate shares would, in most cases, become the farm bases for the 1958 crop. This would not be applicable, of course, for farms which are reconstituted for the 1958 crop. The matter of establishing proportionate shares for such farms will be discussed later in this statement.

Proportionate shares for the crops 1954 through 1957 have been based upon the record of individual farm plantings during the years 1949 through 1953, except in the Meeker Area, where the years 1948 through 1952 were used for the last two crops. The extension of 1957 farm shares as 1958 farm bases would result in no basic change in this method. While this proposal has considerable merit from the standpoint of simplicity, we shall be pleased to receive your views and recommendations on alternative methods for establishing proportionate shares. Alternative methods could include the use of a more current base period.

Items (2) and (3) of the proposal, providing for a minimum proportionate share of 5.0 acres for any old farm and a 5.0 acre share for new farms are self-explanatory. We should like your views realtive to the adequacy of this proposed acreage level.

It is believed that item (4), relating to the protection of share tenants and sharecroppers, needs no further explanation. However, we shall be glad to discuss this matter if there are any questions.

Item (5) refers to the same provision concerning livestock sugar which was considered at last year's hearing. We would welcome any new ideas or opinions with respect to the operation of this provision.

Item (6) provides that the planted acreage records for farms which are subdivided in 1958 would be divided among the subdivisions in a manner similar to that followed under the 1957 program. In view of the rather involved procedure, we believe that it would be well to review briefly the provisions of the 1957-crop determination:

a. The proportionate share for each subdivision of a farm was determined on the basis of the percentage relationship of cropland suitable for the production of sugarcane in each subdivision to such cropland in the 1956 parent farm unless the county committee deter-

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mined that the use of cropland relationships in any case resulted in the establishment of a proportionate share which was not representative of the 1957-crop sugarcane acreage on any subdivision at the time of subdivision, or was not consistent with written evidence of the acreages of sugarcane on any subdivision during the crop years 1954, 1955 and 1956. In such case the county committee was authorized to adjust the proportionate shares taking 1954, 1955, 1956 and 1957 acreages into consideration.

b. If the parties concerned in any subdivision agreed in writing, application could be made to the county committee for the division of the 1956 farm base on the basis of the percentage relationship of the total 1954, 1955, and 1956 sugarcane acreage in each subdivision to the acreage for such years in the parent farm.

c. To avoid the plowing-out of 1957-crop sugarcane acreages, the parties concerned could also agree in writing to establish 1957 shares on the basis of the percentage relationship between the 1957 measured acreage on each subdivision and the 1957 sugarcane acreage on the parent farm. It is clear that if the cropland relationships were used in such cases, one part could have had a smaller proportionate share than the sugarcane acreage grown thereon, while the reverse situation might be true for the other part. Accordingly, it was deemed equitable to divide the 1956 farm base in such cases on the basis of the growing acreage of sugarcane on the subdivisions. It was recognized that the division of the 1956 base by this method would be temporary and that subsequently the base history would be divided permanently on the basis of the cropland relationship or upon agreement of the parties concerned, based upon the sugarcane acreage on the parts for the years 1954, 1955 and 1956. The question is now raised as to when a permanent division of base history should be made in these cases. Should a permanent division be made beginning with 1958 or should recognition be given to the crop cycle on the land? That is, if the acreage growing on the land receiving the advantage of an increased base in 1957 was plant cane, should the temporary arrangement be extended through 1959? Furthermore, where ratoon crops were involved, should an extension be provided to allow completion of the normal crop cycle?

Since the matter of dividing farm history is most important, we shall be pleased to have the advantage of your considered judgement of the problem.

Item (7) provides that the special provisions included in the 1957 program for the Parishes of Avoyelles, St. Landry, and Rapides, would be continued for the 1958 crop.

We welcome any and all comments, suggestions, recommendations, and discussion with respect to the foregoing proposal and any other matters pertinent to the operations of the sugarcane proportionate share program. We are particularly interested in your recommendations regarding the acreage which you believe should be allocated for the 1958 crop as well as the quantity of sugar which you deem should be considered as a normal carryover. In your consideration of the acreage which should be allocated, we again call your attention to the increase in yields of sugar per planted acre which have occurred during recent years and the fact that the burdensome inventories of sugar are costly to growers and processors.

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# THE SUGAR BULLETIN

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Published on the First and Fifteenth of each month
in the interests of the Domestic Sugar Cane Industry

THE
# SUGAR BULLETIN

414 Whitney Bldg., New Orleans 12

Gilbert J. Durbin, Editor — Andrew W. Dykers, Managing Editor

Lloyd L. Lauden, Agronomist and Field Representative

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# UP FRONT WITH THE LEAGUE

*by A. W. Dykers*

### Mr. Myers Visits

We had the pleasure of a nice visit a couple of weeks ago with Mr. Lawrence Myers who spent several days in Louisiana attending the A.S.C. convention in New Orleans July 16th through 18th, and visiting with the local sugar people.

The Head of the Sugar Division didn't let us in on any of his "state secrets" but it was a great pleasure to have him with us and we hope he will visit Louisiana more often.

### The Markets

After moving along at a great rate for the better part of a year the "World" sugar market has suddenly run out of steam. Sugar that the experts apparently knew nothing about has appeared in sufficient quantities to demoralize the situation and prices have dropped almost a cent and a half a pound since the first of July.

World sugar is quoted today (July 25th) at $4.60 a hundred pounds f.o.b. Cuba. This is the lowest quotation since November 26th, 1956 when the World spot price was $4.40 a hundred pounds, and when the market began a more or less steady climb to a high of $6.85 on April 22nd of this year.

The worm has turned. Instead of selling at a substantial premium over U. S. Quota sugars World sugars are now considerably below the comparable "Domestic' 'value. This means that the Sugar Division will have to shift gears. The World market has changed from a stimulant to a depressant.

### Quota Actions

For the record, we list the actions of the Sugar Division since January 1st to combat *rising* sugar prices in the Domestic market.

On January 11th, when the Domestic price of raws was 6.45, quotas were increased from 8,800,000 tons to 9,000,000 tons.

On May 24th, when the price of Domestic raws was again at 6.45, a Puerto Rican deficit of 150,000 tons was reallocated.

On June 12th, when the price of Domestic raws was 6.55, quotas were increased 100,000 tons to 9,100,000 tons.

On June 14th, when the price of Domestic raws was 6.55, restrictions were listed to allow offshore areas to market their entire quotas at any time during the year.

On June 26th, when the price of Domestic raws was 6.55, the full marketing privilege was extended to Louisiana and Florida.

On July 5th, when the Domestic price was 6.60, quotas were increased 200,000 tons to 9,300,000 tons.

On July 18th, when the price of Domestic raws was 6.50, a 143,977 ton Hawaiian and Puerto Rican deficit was reallocated.

### Crop Report

The following report on the condition of the cane crop is from the July 12th circular of the Louisiana Crop Reporting Service of the U.S. D.A. and L.S.U. The report applies to conditions on July 1, 1957.

"Sugarcane tonnage for sugar and seed is estimated at 6,048,000 net tons, 15 percent more than last year and 10 percent above average. Acre-

(Continued on page 303)

# IN THE FIELD WITH LLOYD LAUDEN

*by Lloyd L. Lauden*

## Nutria in the Cane Fields

For the past several years, complaints have been made by cane farmers in the Teche area that a large rat called the nutria was damaging sugar cane. At first, and during the first few years the nutria was noticed, the damage done to cane was only slight. Unfortunately, this rat multiplied rapidly and as the population increased so did its appetite for cane.

The damage done by this pest last year in the Teche area was considerable, but nothing to compare with the damage done this year. This year, many acres on many farms in the Teche country have been completely stripped of cane. The cane feeding habit of the nutria is very wasteful. It appears that the animal gnaws through a stalk of cane, eating only until the stalk falls to the ground then the pest gnaws at another stalk. This continues from one stalk to another. It has been reported that whole fields of cane measuring up to 10 acres have been cut and completely destroyed by nutria in a matter of several nights. High water pushed in by Hurricane Audrey carried many of these pests from the marshes to the croplands. Finding an abundant food supply in the croplands, the nutria did not recede with the water. This added many thousand to the large number already in the area.

Although wholesale cane damage has occurred only in the Teche area, reports indicate the nutria have migrated into the cane fields of most of the sugar belt. The increase in population and its rapid spread throughout the cane belt can cause serious damage to our entire crop each year. Something has to be done to bring this menace under control.

Unfortunately, this overgrown rodent, reported to obtain a weight of up to 25 pounds, is a fur bearing animal and is, therefore, given protection by the Louisiana Wild Life and Fisheries Commission. To kill or trap a nutria, farmers are supposed to get special permits from the Commission.

Before a control program can be developed, the nutria must first be officially branded as an outlaw. Other than trapping, no effective control measure is known and there is a pressing need for research that will develop effective control measures. This will take time.

Mr. Sidney McCrory, Commissioner of Agriculture, has arranged for a public hearing to discuss the nutria problem. The meeting will be held Friday, August 2, 1957, at 2 o'clock in the afternoon at the New Iberia Court House. Sugarcane farmers who have suffered crop damage done by the nutria should attend this hearing. In addition to Commissioner McCrory, Mr. Lamar Clement, Director of Wildlife and Fisheries Commission, will attend the meeting.

Any farmer in the sugar belt who now thinks of this animal as just another minor pest similar to the common field rat or the raccoon has only to visit the nutria infested cane

# IN WASHINGTON WITH JOE FERRIS

*by Josiah Ferris*

### Dudley Smith in Asia

Dudley Smith, Vice President, Puerto Rican Sugar Producers Association and Chairman of the Sugar Advisory Committee on Marketing and Research, and Albert Neimur, formerly sugar expert with the U. S. Department of Commerce have departed for an eight weeks' sojourn in South Vietnam. Messrs. Smith and Neimur have contracted with the International Cooperation Administration to make a survey of the sugar industry in South Vietnam and to make recommendations for the rehabilitation both agriculturally and economically, of cane sugar mills and sugar cane plantations which were seriously damaged, and in some instances almost totally destroyed, by the enemy during the late war.

Dr. Arthur Keller of the School of Engineering of the University of Louisiana, international expert on sugar extraction, will fly to South Vietnam early this month to collaborate with Smith and Neimur on the report to ICA.

If the foreign Aid Bill now pending in Congress is passed in its present form it will provide funds enabling the International Cooperation Administration, at its discretion, to rebuild the sugar industry of South Vietnam.

At the conclusion of their work in South Vietnam, Smith and Neimur will return to the United States via Turkey, Spain and other points of interest along the Mediterranean.

### Certification Required

The U. S. Department of Agriculture announced that after the close of business July 23 certification by the Department will be required before any sugar from Cuba may be entered for direct consumption.

The requirement, which will remain in effect until January 1, 1958, has become effective because more than 80 percent of the quantity of direct-consumption sugar which may be entered in 1957 from Cuba has already arrived. The certification method is a means of preventing entries of sugar in excess of the quota.

Form SU-3, Application for Entry of Sugar, must be submitted to the Sugar Division, Commodity Stabilization Service, U. S. Department of Agriculture, Washington 25, D. C., for approval by the Department prior to the entry of the Cuban direct-consumption sugar. Heretofore, in 1957, applications on Form SU-3 were filed directly with the Collectors of Customs at the port of entry.

"Notice No. 1 of Requirement of Certification — 1957" was published in the Federal Register July 24, 1957.

Certifications of Cuban raw sugar for further processing will not be required until 80 percent of the overall quota for Cuba has been entered and notice thereof has been published in the Federal Register.

---

area in and around Franklin, Bayou Sale, Centerville, Cypremort, Jeanerette, and New Iberia, to have a change in attitude.

# HEARING SET ON WAGES AND PRICES FOR LOUISIANA SUGARCANE

On July 8th the U. S. Department of Agriculture announced that a public hearing will be held on Louisiana sugarcane wages and prices in the City Hall auditorium at Thibodaux, La., August 7, 1957 at 10 a.m.

Testimony will be received on (1) fair and reasonable wage rates for workers in Louisiana employed in harvesting 1957 crop sugarcane, and in producing and cultivating sugarcane during 1958, and (2) fair prices for 1957 crop sugarcane.

One condition producers must meet to qualify for payments under the Sugar Act is to pay all persons employed on the farm in producing, cultivating, or harvesting sugarcane wage rates not less than those determined as fair and reasonable by the Secretary of Agriculture after a public hearing and investigation. Another condition is that processors who are also producers must pay prices determined to be fair and reasonable for sugarcane purchased from other producers.

In order to obtain the best possible information, USDA requests that all interested persons appear at the hearing to present their views and pertinent data. Information and recommendations are requested specifically on the pricing period for raw sugar and molasses, the absorption by the processor of the costs of hoisting and weighing sugarcane, the amount of transportation allowances which the processor shall pay to producers, and the price for salvage sugarcane.

## SUGAR MARKET STATISTICS THROUGH JULY 25, 1957

| | Today | 1 Month Ago | 1 Year Ago |
|---|---|---|---|
| QUOTA RAWS DELIVERED NEW YORK | 6.35 | 6.55 | 6.15 |
| QUOTA RAWS DELIVERED NEW ORLEANS | 6.31 | 6.49 | 6.10 |
| WORLD SPOT RAWS (In Cuba) | 4.60 | 6.18 | 3.41 |

SUGAR FUTURES No. 6
(Closing Bid Prices)

| | Sept. | Nov. | Mch. |
|---|---|---|---|
| Today | 5.84 | 5.75 | 5.80 |
| 1 Month Ago | 6.06 | 6.05 | 5.75 |
| 1 Year Ago | 5.65 | 5.64 | 5.41 |

OFFSHORE RECEIPTS AT NEW ORLEANS
(Long Tons, 2,240 lbs.)

| | To Date 1957 | Same Date 1956 |
|---|---|---|
| American | 230,265 tons | 230,188 tons |
| National (Godchaux) | 112,281 tons | 142,513 tons |
| Colonial | 96,499 tons | 114,250 tons |
| Henderson | 70,065 tons | 74,725 tons |
| Southdown | 24,765 tons | 37,577 tons |
| South Coast | 36,621 tons | 54,162 tons |
| Supreme | 64,364 tons | 82,465 tons |
| Totals | 634,860 tons | 735,880 tons |

# SUGAR QUOTAS INCREASED TO FILL DEFICITS

On July 17th the U. S. Department of Agriculture announced that 1957 sugar quotas for the domestic beet sugar area, the mainland cane sugar area and Cuba had been increased 143,977 short tons, raw value, to fill deficits in the quotas for Puerto Rico, Hawaii and the Virgin Islands.

This revision results in increases in the quotas for the domestic beet sugar area of 76,066 short tons, raw value, the mainland cane sugar area of 23,406 tons and Cuba of 44,505 tons.

The deficits within basic quotas for the three areas total 288,490 short tons, raw value. This includes a previously announced deficit of 189,184 short tons, raw value, in the Puerto Rican quota and new deficits of 27,970 tons in the Hawaiian quota and 1,083 tons for the Virgin Islands and an additional deficit of 70,253 tons in the Puerto Rican quota.

Previously, the 189,184 ton deficit for Puerto Rico was prorated to the domestic beet sugar area (80,041 tons), the mainland cane sugar area (24,629 tons), Cuba (39,843 tons) and Hawaii (44,671 tons). Today's action reallocates Hawaii's share of the Puerto Rican deficit to the domestic areas and Cuba. Proration of the deficit of 288,490 tons is needed to assure that the total U. S. requirements now set under the Sugar Act of 1948 at 9,300,000 tons for 1957 as announced July 5 (USDA Release 2108-57) will be filled.

Estimates of Hawaiian sugar processings now indicate deliveries of approximately 1,100,000 tons to the United States. Data available upon completion of crops shows maximum prospective deliveries of 920,000 tons from Puerto Rico and 15,000 tons from the Virgin Islands.

The new deficit prorations (deficits are in parenthesis), adjusted quotas, and changes from previous quotas follow. Country quotas not listed and "direct-consumption limits" for all areas are unchanged from the July 5 announcement.

| Area | Proration of deficit | New quotas adjusted for proration of deficit | Change from previous quotas |
|---|---|---|---|
| | (short tons, raw value) | | |
| Domestic beet sugar | 156,107 | 2,177,205 | 76,066 |
| Mainland cane sugar | 48,035 | 669,947 | 23,406 |
| Hawaii | (27,970) | 1,100,000 1/ | (72,641) |
| Puerto Rico | (259,437) | 920,000 1/ | (70,253) |
| Virgin Islands | (1,083) | 15,000 1/ | ( 1,083) |
| Cuba | 84,348 | 3,174,413 | 44,505 |
| Sub-total | 00 | 8,056,565 | 00 |
| Foreign countries other than Cuba (unchanged) | | 1,243,435 | |
| Total | | 9,300,000 | |

1 Expected deliveries. Despite declaration of deficits, full basic quotas are available to these areas as follows: Hawaii 1,127,970; Puerto Rico 1,179,437; Virgin Islands 16,083 short tons, raw value.

## UP FRONT

(Continued from page 299)

age was increased 14 percent to 252,000 acres this year in line with an increase in the proportionate share acreage. Indicated yield per acre at 24 tons is slightly above last year and well above average. Damage from the hurricane is not thought to be significant, although cane was subjected to high wind and some canes were broken. Moisture has been ample thus far to bring cane along in good shape."

### St. James Field Day

The Annual St. James field Day will be held this year on August 8th according to an announcement received from Kermit J. Coulon, St. James Parish County Agent.

Field demonstrations will be held on the F. A. Graugnard & Sons' Farm and registrations will be taken at the St. James High School beginning at 8 A.M.

The farm tour will include result demonstrations on Hybrid Corn Varieties; Sugar Cane Varieties; Heat Treated Cane; Irrigation of Cane; Red Clover Silage Preserved with Raw Sugar; and a look at sugar fed hogs.

Gilbert J. Durbin, General Manager of the American Sugar Cane League, will be the featured speaker at the afternoon meeting.

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# THE SUGAR BULLETIN

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## SPECIAL STATISTICAL ISSUE

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in the interests of the Domestic Sugar Cane Industry

THE
# SUGAR BULLETIN

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## CROPLAND—PROPORTIONATE SHARE—PLANTED ACRES OF LOUISIANA SUGARCANE FARMS PARTICIPATING IN THE SUGAR PROGRAM (SUGAR ACT OF 1937) BY PARISHES, FROM A.. A. A. REPORTS

| PARISHES | Cropland (Acres) | | | | Proportionate Shares (Acres) | | | | Total Planted (Acres) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1953 | 1954 | 1955 | 1956 | 1953 | 1954 | 1955 | 1956 | 1953 | 1954 | 1955 | 1956 |
| Ascension | 24,050.4 | 22,560.2 | 21,963.9 | 22,245.2 | 13,402.1 | 12,863.8 | 11,364.5 | 10,151.1 | 13,461.1 | 13,368.5 | 11,612.7 | 10,827.3 |
| Assumption | 46,315.7 | 45,676.5 | 42,224.7 | 45,129.2 | 31,428.3 | 27,680.6 | 25,685.6 | 22,628.3 | 31,431.3 | 27,924.1 | 25,957.0 | 22,760.3 |
| Avoyelles | 7,945.1 | 6,639.7 | 7,916.6 | 7,713.7 | 2,147.6 | 1,689.4 | 1,789.1 | 1,759.9 | 2,352.0 | 1,814.6 | 2,046.0 | 1,843.6 |
| East Baton Rouge | 822.9 | | | | 83.6 | | | | 83.6 | | | |
| East Feliciana | 50.0 | 50.0 | 50.0 | 50.0 | | .4 | .4 | .4 | .5 | .4 | .4 | .4 |
| Iberia | 75,695.0 | 77,304.7 | 72,615.5 | 72,428.5 | 40,589.2 | 36,652.1 | 33,352.5 | 29,493.0 | 40,635.9 | 38,104.6 | 34,364.0 | 30,991.6 |
| Iberville | 38,822.9 | 39,049.7 | 39,349.5 | 37,315.7 | 20,135.7 | 17,899.3 | 16,651.4 | 13,972.2 | 20,802.8 | 18,792.0 | 17,469.5 | 15,213.6 |
| Lafayette | 17,040.3 | 18,095.1 | 19,416.9 | 18,980.3 | 8,901.7 | 7,647.4 | 7,219.5 | 6,497.5 | 8,956.0 | 7,817.0 | 7,383.8 | 6,749.6 |
| Lafourche | 49,659.5 | 42,275.5 | 43,367.6 | 43,168.7 | 29,895.3 | 25,129.3 | 24,234.6 | 21,637.3 | 29,895.3 | 25,129.3 | 24,446.0 | 22,133.0 |
| Pointe Coupee | 26,085.7 | 26,064.2 | 26,013.1 | 27,189.5 | 8,857.7 | 8,685.8 | 8,544.5 | 8,117.3 | 8,857.7 | 8,811.5 | 8,646.1 | 8,369.9 |
| Rapides | 3,274.3 | 2,960.1 | 3,330.5 | 3,645.6 | 708.9 | 674.7 | 659.9 | 748.4 | 755.8 | 703.2 | 791.7 | 885.2 |
| St. Charles | 2,527.4 | 2,781.4 | 2,783.8 | 2,796.2 | 1,529.3 | 1,441.3 | 1,329.6 | 1,160.3 | 1,529.3 | 1,483.9 | 1,365.8 | 1,299.7 |
| St. James | 30,662.5 | 29,663.3 | 29,444.1 | 28,393.9 | 17,299.7 | 15,466.7 | 14,382.6 | 12,246.1 | 17,299.7 | 15,895.9 | 14,712.0 | 12,980.6 |
| St. John | 22,706.3 | 22,257.0 | 22,264.3 | 24,184.9 | 15,179.7 | 13,239.6 | 12,560.0 | 11,484.1 | 15,715.4 | 13,975.5 | 13,396.7 | 12,922.7 |
| St. Landry | 886.3 | 231.6 | 231.6 | 410.0 | 184.9 | 128.6 | 117.5 | 143.8 | 364.5 | 128.6 | 117.5 | 143.8 |
| St. Martin | 38,791.7 | 37,947.8 | 41,651.6 | 40,721.1 | 19,475.8 | 16,932.6 | 16,728.2 | 15,197.0 | 19,520.3 | 17,025.8 | 16,770.1 | 15,295.3 |
| St. Mary | 58,170.0 | 97,916.6 | 53,457.1 | 53,567.6 | 37,863.8 | 32,031.4 | 30,053.7 | 26,055.7 | 37,866.3 | 32,324.7 | 30,483.8 | 27,078.8 |
| Terrebonne | 56,197.8 | 53,262.5 | 50,257.4 | 50,690.3 | 35,032.2 | 31,513.7 | 28,526.3 | 25,232.9 | 35,052.6 | 31,547.9 | 28,626.3 | 25,471.3 |
| Vermilion | 14,620.6 | 14,784.8 | 13,212.9 | 12,609.7 | 2,633.2 | 2,511.1 | 2,360.3 | 2,157.8 | 4,018.6 | 3,603.2 | 3,709.8 | 3,450.1 |
| West Baton Rouge | 23,891.4 | 23,759.2 | 24,585.9 | 27,804.4 | 13,527.3 | 12,235.0 | 12,051.0 | 11,070.4 | 13,700.4 | 12,536.1 | 12,541.1 | 11,652.4 |
| West Feliciana | 10,829.3 | 12,741.3 | 12,741.3 | 12,741.3 | 1,778.1 | 1,939.2 | 1,962.9 | 1,838.5 | 1,778.1 | 1,939.2 | 2,012.2 | 1,838.5 |
| TOTAL | 549,045.1 | 576,021.2 | 526,898.3 | 531,785.8 | 300,654.6 | 266,362.0 | 249,576.1 | 221,592.0 | 304,077.2 | 272,926.0 | 256,454.5 | 231,907.7 |

## PROPORTIONATE SHARE ACRES HARVESTED FOR SUGAR—YIELD OF SUGARCANE PER ACRE AND YIELD OF RECOVERABLE SUGAR PER ACRE OF LOUISIANA FARMERS PARTICIPATING IN THE SUGAR PROGRAM (SUGAR ACT OF 1937) BY PARISHES FROM A. A. A. REPORTS

| PARISHES | Prop. Share | Proportionate Shares Harvested for Sugar (Acres) | | | | Yield of Cane Per Acre Tons | | | | Yield of Recoverable Sugar per Acre CWT | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1956 | 1953 | 1954 | 1955 | 1956 | 1953 | 1954 | 1955 | 1956 | 1953 | 1954 | 1955 | 1956 |
| Ascension | 10,211.0 | 12,681.6 | 12,062.2 | 10,780.4 | 9,543.6 | 20.60 | 22.95 | 25.21 | 25.20 | 36.39 | 38.22 | 37.65 | 43.00 |
| Assumption | 22,764.4 | 29,677.1 | 25,651.4 | 24,094.0 | 20,750.0 | 22.35 | 25.72 | 25.83 | 25.13 | 39.40 | 43.35 | 39.90 | 44.17 |
| Avoyelles | 1,850.3 | 2,026.6 | 1,517.2 | 1,660.1 | 1,658.0 | 15.09 | 16.46 | 17.67 | 20.32 | 24.94 | 27.12 | 25.88 | 31.90 |
| East Baton Rouge | | 82.1 | | | | 18.22 | | | | 31.76 | | | |
| East Feliciana | 5.0 | .5 | .4 | .4 | .4 | 13.60 | | 22.50 | 6.50 | 23.44 | | 25.12 | 10.60 |
| Iberia | 30,393.0 | 37,194.1 | 33,787.6 | 30,396.3 | 26,581.5 | 17.87 | 19.23 | 20.14 | 20.35 | 31.56 | 32.19 | 32.22 | 35.64 |
| Iberville | 14,204.3 | 18,765.1 | 16,537.2 | 15,604.1 | 12,764.4 | 22.34 | 26.60 | 28.13 | 29.10 | 37.55 | 43.13 | 42.86 | 49.48 |
| Lafayette | 6,898.7 | 8,302.3 | 7,001.4 | 6,625.4 | 5,883.0 | 19.69 | 20.03 | 22.50 | 21.06 | 33.85 | 31.03 | 32.27 | 33.75 |
| Lafourche | 22,180.2 | 28,502.8 | 23,735.7 | 22,927.3 | 20,105.7 | 21.54 | 24.98 | 25.96 | 23.95 | 37.43 | 42.11 | 42.17 | 42.65 |
| Pointe Coupee | 8,664.5 | 8,291.3 | 8,180.6 | 8,127.5 | 7,666.7 | 21.91 | 22.63 | 26.14 | 23.91 | 37.11 | 36.16 | 38.97 | 40.91 |
| Rapides | 799.9 | 685.9 | 645.1 | 632.8 | 699.7 | 22.15 | 21.83 | 26.63 | 24.66 | 38.47 | 36.00 | 38.85 | 38.79 |
| St. Charles | 1,181.1 | 1,437.0 | 1,369.1 | 1,272.2 | 1,084.9 | 20.15 | 23.75 | 26.03 | 20.54 | 33.98 | 38.17 | 41.50 | 36.28 |
| St. James | 12,390.6 | 16,366.7 | 14,599.5 | 13,625.0 | 11,432.1 | 22.34 | 24.41 | 27.10 | 25.99 | 38.98 | 41.20 | 43.22 | 46.66 |
| St. John | 11,664.1 | 14,252.0 | 12,336.1 | 11,777.9 | 10,603.2 | 21.29 | 24.00 | 25.74 | 23.85 | 37.33 | 40.94 | 43.09 | 45.63 |
| St. Landry | 165.6 | 166.9 | 121.6 | 112.5 | 140.8 | 18.70 | 15.62 | 20.60 | 17.10 | 31.87 | 24.55 | 28.73 | 27.19 |
| St. Martin | 16,499.8 | 18,105.6 | 15,679.7 | 14,821.6 | 14,042.8 | 17.13 | 19.21 | 20.31 | 19.85 | 29.74 | 32.55 | 30.86 | 33.52 |
| St. Mary | 26,585.7 | 34,918.2 | 29,455.2 | 27,989.2 | 23,602.1 | 19.06 | 20.13 | 21.47 | 21.96 | 33.69 | 34.27 | 36.29 | 39.87 |
| Terrebonne | 25,347.7 | 32,716.8 | 29,258.0 | 26,849.3 | 23,150.6 | 21.70 | 23.05 | 26.86 | 23.73 | 39.74 | 40.51 | 44 41 | 43.86 |
| Vermilion | 2,586.3 | 2,295.8 | 2,313.5 | 2,137.1 | 1,934.7 | 15.51 | 18.49 | 20 97 | 18.26 | 26.00 | 29.32 | 30.53 | 31.21 |
| West Baton Rouge | 11,229.1 | 12,259.3 | 11,194.8 | 11,202.2 | 10,032.3 | 24.20 | 27.19 | 28.36 | 29.22 | 41.66 | 44.69 | 45.11 | 51.26 |
| West Feliciana | 1,873.5 | 1,513.9 | 1,696.9 | 1,810.7 | 1,609.2 | 25.66 | 19.68 | 28.43 | 22.58 | 41.78 | 33.43 | 43.26 | 38.22 |
| TOTAL | 227,495.0 | 280,241.6 | 247,143.2 | 232,448.0 | 203,285.7 | 20.55 | 22.75 | 24.36 | 23.61 | 35.95 | 38.16 | 38.64 | 41.71 |

## RECAPITULATION OF FINAL REPORTS OF LOUISIANA SUGAR CANE FACTORIES, CROPS 1947-1956, By Mr. Grayson of P. & M. A.

| Total for State Factories | 59 | 59 | 54 | 54 | 54 | 54 | 54 | 54 | 53 | 50 |
|---|---|---|---|---|---|---|---|---|---|---|
| Year | 1947 | 1948 | 1949 | 1950 | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 |
| Crop Days | 68.50 | 78.8 | 67.4 | 64.2 | 54.2 | 64.24 | 69.5 | 62.9 | 63.9 | 55.02 |
| Lost time % total time | 28.42 | 22.98 | 16.45 | 11.57 | 15.32 | 11.81 | 14.56 | 13.08 | 12.61 | 11.75 |
| Cane: Tons ground, gross weight | 4,045,964 | 5,459,637 | 5,210,195 | 5,550,549 | 4,663,774 | 5,869,257 | 6,054,764 | 5,941,406 | 5,949,155 | 5,109,238 |
| Tons ground, net weight | 3,917,100 | 5,256,644 | 4,983,982 | 5,311,857 | 4,462,854 | 5,666,917 | 5,759,310 | 5,624,800 | 5,664,412 | 4,817,145 |
| % Total Cane Ground, Gross Weight | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Tons Ground per Hour | 55.48 | 60.47 | 67.63 | 71.52 | 74.34 | 77.08 | 74.53 | 79.39 | 83.74 | 84.32 |
| Extraction N. J. % Cane | 70.61 | 71.90 | 72.86 | 72.21 | 72.09 | 72.74 | 71.23 | 72.39 | 73.16 | 72.83 |
| Sucrose Extraction, % | 89.06 | 89.58 | 90.57 | 90.10 | 89.45 | 89.76 | 88.97 | 89.69 | 90.13 | 90.18 |
| Maceration % Cane | 19.40 | 17.74 | 17.63 | 17.04 | 13.89 | 15.69 | 18.56 | 17.08 | 17.58 | 18.83 |
| Fiber % Cane | 15.15 | 14.95 | 14.58 | 14.96 | 14 50 | 14.35 | 14.78 | 14.51 | 14.28 | 14.65 |
| Java Ratio | 75.39 | 75.83 | 76.66 | 76.18 | 74.79 | 76.93 | 75.61 | 75.98 | 76.72 | 75.94 |
| Analysis | | | | | | | | | | |
| Crusher Juice Brix | 16.53 | 16.32 | 16.66 | 17.19 | 15.39 | 16.93 | 17.32 | 16.89 | 16.52 | 17.28 |
| Crusher Juice Sucrose | | | | | | | 13.64 | 13.34 | 12.68 | 13.81 |
| Brix Factor (Final Report) | 97.52 | 97.12 | 97.06 | 97.15 | 97.27 | 97.06 | 97.00 | 96.92 | 96.85 | 96.93 |
| Sucrose Factor (Final Report) | 95.14 | 94.45 | 95.30 | 95.04 | 94.57 | 94.95 | 94.43 | 94.15 | 94.56 | 94.06 |
| Normal Juice Brix | 16.12 | 15.85 | 16.17 | 16.70 | 14.97 | 16.43 | 16.80 | 16.37 | 16.00 | 16.75 |
| Normal Juice Sucrose | 12.33 | 11.91 | 12.37 | 13.03 | 10.80 | 12.22 | 12.88 | 12.56 | 11.99 | 12.99 |
| Normal Juice Purity | 76.49 | 75.14 | 76.38 | 78.02 | 72.14 | 74.38 | 76.67 | 76.73 | 74.94 | 77.55 |
| Factory Syrup, Brix | 56.92 | 57.22 | 58.56 | 58.24 | 56.91 | 58.81 | 58.13 | 56.55 | 57.96 | 57.91 |
| Residual Juice Brix | 6.27 | 6.50 | 6.23 | 6.50 | 6.60 | 6.67 | 6.37 | 6.42 | 5.98 | 6.17 |
| Bagasse Sucrose | 3.16 | 3.08 | 2.90 | 3.22 | 2.93 | 3.23 | 3.40 | 3.27 | 3.07 | 3.18 |
| Bagasse Moisture | 49.87 | 49.28 | 49.27 | 48.45 | 49.51 | 49.69 | 50.06 | 49.99 | 49.82 | 50.05 |
| Bagasse Fiber | 45.69 | 46.19 | 46.43 | 46.63 | 46.18 | 45.75 | 44.20 | 45.45 | 45.68 | 45.54 |
| Press Cake Sucrose | 3.86 | 4.18 | 3.68 | 4.10 | 4.42 | 3.81 | 4.21 | 4.08 | 4.17 | 4.33 |
| Sucrose Balance | | | | | | | | | | |
| Molasses, Sucrose % Cane | 1.012 | 1.084 | .996 | 1.132 | 1.261 | 1.164 | 1.105 | 1.022 | 1.096 | 1.041 |
| Press Cake, Sucrose % Cane | .168 | .191 | .147 | .158 | .165 | .156 | .180 | .165 | .169 | .167 |
| Undetermined, Sucrose % Cane | .365 | .273 | .211 | .234 | .228 | .177 | .269 | .184 | .151 | .146 |
| Bagasse, Sucrose % Cane | 1.069 | .997 | .938 | 1.034 | .920 | 1.014 | 1.137 | 1.045 | .959 | 1.030 |
| Total Losses, Sucrose % Cane | 2.614 | 2.545 | 2.292 | 2.558 | 2.574 | 2.511 | 2.691 | 2.416 | 2.375 | 2.384 |
| Sugar, Sucrose % Cane | 7.157 | 7.017 | 7.659 | 7.886 | 6.154 | 7.390 | 7.622 | 7.720 | 7.353 | 8.104 |
| Total, Sucrose % Cane | 9.771 | 9.562 | 9.951 | 10.444 | 8.728 | 9.901 | 10.313 | 10.136 | 9.728 | 10.488 |
| Pounds 96° Sugar M&E Ton Gross Cane | 149.10 | 146.19 | 159.56 | 164.29 | 128.21 | 153.96 | 158.79 | 160.83 | 153.19 | 168.83 |
| Pounds 96° Sugar M&E Ton Net Cane | | | 166.80 | 171.67 | 133.98 | 159.46 | 166.93 | 169.88 | 160.89 | 179.07 |
| Gals. F. M. (B/S) M. & E. T/C 80° Brix | 6.78 | 7.15 | 6.80 | 6.90 | 8.01 | 7.82 | 6.94 | 6.67 | 7.28 | 6.56 |
| Boiling House Efficiency Number | 93.73 | 94.39 | 96.97 | 94.45 | 93.16 | 97.83 | 94.61 | 96.61 | 96.83 | 96.93 |

## LOUISIANA MILL REPORTS

### Production of Sugars (tons, 2,000 lbs.), Syrup, 1st Molasses, 2nd Molasses, and Blackstrap—1947-1956

| | 1947 | 1948 | 1949 | 1950 | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 |
|---|---|---|---|---|---|---|---|---|---|---|
| Raw Sugar 96° | 211,305 | 298,371 | 308,866 | 331,156 | 215,730 | 325,929 | 358,424 | 376,391 | 363,234 | 336,795 |
| Clarified | 1,378 | 325 | 0 | 0 | ------ | ------ | ------ | ------ | ------ | ------ |
| Turbinados | 16,243 | 22,325 | 26,856 | 35,527 | 26,078 | 36,294 | 37,635 | 41,790 | 43,949 | 40,684 |
| Granulated | 60,379 | 65,804 | 58,746 | 70,534 | 44,019 | 67,199 | 64,910 | 46,710 | 31,754 | 39,319 |
| Washed Raws | xx0 | 0 | 0 | 6,248 | 4,273 | 8,393 | 6,373 | ------ | 4,870 | 2,719 |
| Total Sugars (Raw Value) | 296,932 | 397,293 | 415,811 | 456,246 | 296,566 | 450,690 | 480,633 | 478,413 | 455,209 | 431,624 |
| String—Others | 0 | 755 | 178 | 796 | ------- | 157 | 460 | 275 | 904 Lbs. | 128 |
| Sirup—Gallons | 3,118,159 | 494,726 | 1,075,843 | 1,725,787 | 1,085,220 | 1,314,161 | 892,146 | 1,224,999 | 1,397,874 | 1,143,480 |
| 1st Molasses—Gallons | 2,179,258 | 2,192,738 | 1,588,612 | 2,730,680 | 1,599,423 | 1,997,349 | 1,506,982 | 1,450,251 | 1,640,898 | 1,150,873 |
| 2nd Molasses—Gallons | 2,966,514 | 1,823,747 | 1,725,655 | 1,608,557 | 1,684,990 | 2,079,561 | 1,451,038 | 1,369,755 | 1,552,163 | 1,233,328 |
| Blackstrap (Actual Gallons) | 21,676,476 | 33,279,520 | 30,121,524 | 32,703,162 | 32,202,814 | 39,030,897 | 36,330,800 | 34,198,437 | 37,902,846 | 29,043,451 |

xx Included in clarified production

# RESULTS OF SUGARCANE VARIETY TESTS IN LOUISIANA DURING 1956*

*By R. J. Matherne and Leo P. Hebert, Research Agronomists, Crops Research Division, Agricultural Research Service, United States Department of Agriculture*

The change in procedure for conducting the outfield agronomy trials of the State and Federal stations on cooperating plantations which went into effect beginning with the planting season of 1955 was described in our last year's report(6). Prior to that time, the U. S. Department of Agriculture and the Louisiana Agricultural Experiment Station each carried on its work at a series of test fields, using different methods, although there was always free exchange of information during the course of the work and joint final evaluation of the results. Beginning with the plantings made in the fall of 1955 a uniform design was used for the experiments planted at all test field locations of both agencies.

The plant cane results for 1956 are the first to be obtained under the consolidated program, and also the first test field results available from plantings made with progeny of seed that had been treated with hot air for control of stunting disease. The cane from all tests, both plant cane and stubble, was weighed with the Houma station's portable weighing equipment and all samples were analyzed at the Houma laboratory. The summarized data from all test fields will be made available to the industry in a single 5-year summary sheet, as was done in 1956. In this report are presented the results of experiments for which the Houma station has primary responsibility. The L.S.U. station will report separately on the results of tests for which it has primary responsibility.

Of special importance in the results of 1956 were the continued good performance of C. P. 44/101 and N. Co. 310, the outstanding early maturity of C. P. 48/103, and the promise of the unreleased variety, C. P. 52/68.

## Weather Conditions

The last killing freeze of the 1955-56 winter at Houma was on January 20 when a low of 32°F. was recorded. There were 8 days in January with sub-freezing temperatures, but the remainder of the growing season was free of killing freezes in the vicinity of Houma. Relatively cool weather prevailed until April and the crop did not make much growth until after that time. Although no damage to cane was reported, near freezing temperatures were recorded in the western and northern sections of the Sugar Belt on March 8 and 9.

The first freeze of the harvest season occurred at Houma on November 10, when a low of 30°F. was recorded, with slightly lower temperatures being reported in the northern area. The crop was considerably damaged later in the month when lows of 27°, 24°, 27°, and 24°F. occurred on November 23, 27, 28, and 30, respectively. From then on there were very few living buds left on the stalks although the cane remained in a sound condition at Houma until December 14, and all varieties in maturity tests increased slightly in sugar content until that date (table 2). All juice samples from the outfield tests were analyzed in the usual manner without difficulty in clarification.

Table 1 gives the monthly rainfall at each test field location during 1956. Rainfall was adequate and the distribution during the growing season was such that the crop did not suffer for want of rain at

Houma and in most of the sugar belt, but there were some exceptions, notably in the northeast section. During August and September there was very little rain at the Alma test field and the crop there was affected by the drouth. Harvest operations were facilitated by the relatively dry weather in late October and November when rainfall was generally low over most of the district.

## Experimental Technique

Methods used by the U. S. Department of Agriculture to evaluate sugarcane varieties on cooperating plantations have been described in previous reports (5, 6). All plant cane tests consisted of complete randomized blocks with 4 replications of approximately 1/100 acre with 17 varieties in each block. Twenty varieties were included in first stubble tests. A group consisting of 8 commercial varieties was replicated 4 times and another group of 8 promising unreleased varieties, together with 4 check varieties, was replicated twice. Two levels of nitrogen were applied to both plant cane and first stubble experiments but the effect of the nitrogen treatments is not discussed in this report. The Raceland second stubble test was a randomized block experiment with 4 replications of each of 20 commercial and promising unreleased varieties with plots approximately 1/60 acre in size. Two levels of nitrogen were used in this test, but, as pointed out above, fertilizer treatments are not considered in this report. The Bon Secour second stubble test was similar to the first stubble experiments described above.

Cane was cut top and bottom by hand in most cases and the trash burned, or, where it was impossible to burn, the gross weights were taken and adjustments were made for trash content as determined in previous trials with due consideration given to varietal differences in this respect.

One 20-stalk sample from each plot was taken to Houma for milling and juice analysis. Theoretical sugar yields were calculated according to the Winter - Carp - Geerligs formula from Brix and sucrose analysis of the primary or crusher juice, using Arceneaux's simplification (1). Varieties differ in juice extraction, fiber content, and in purity drop from primary juice to normal juice, and these facts were taken into consideration in arriving at the indicated sugar yields.

## Maturity Studies

Results of maturity studies conducted during the harvest season with 6 commercial varieties in plant

**TABLE 1.**
**Monthly rainfall at cooperative variety test stations during 1956.**

| Station | Monthly rainfall during 1956 (inches) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Jan. | Feb. | March | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total |
| Raceland | 2.39 | 5.82 | 3.58 | 3.47 | 4.29 | 8.75 | 7.82 | 3.94 | 10.05 | 2.60 | 1.15 | 4.95 | 58.81 |
| Greenwood | 2.90 | 4.60 | 4.30 | 3.40 | 6.25 | 9.00 | 2.15 | 3.40 | 8.30 | 1.70 | 2.10 | 10.40 | 58.50 |
| Oaklawn | 2.35 | 6.40 | 3.00 | 2.55 | 11.80 | 3.60 | 1.85 | 6.60 | 6.10 | 2.20 | 6.20 | 7.15 | 59.80 |
| *Albania | 3.10 | 7.27 | 3.09 | 4.48 | 3.67 | 7.39 | 2.04 | 6.45 | 2.64 | 0.98 | 0.80 | 8.30 | 50.21 |
| Levert-St.John | 3.80 | 7.60 | 4.53 | 1.94 | 4.00 | 9.60 | 2.03 | 5.75 | 3.75 | 1.66 | 4.25 | 8.72 | 57.63 |
| Alma | 2.75 | 10.00 | 4.25 | 2.55 | 3.35 | 7.00 | 4.40 | 1.70 | 1.10 | 2.55 | 2.41 | 5.80 | 47.86 |
| Bon Secour | 2.38 | 7.83 | 4.04 | 3.36 | 5.21 | 6.28 | 5.99 | 2.76 | 5.74 | 0.93 | 2.56 | 8.52 | 55.60 |
| Elm Hall | 3.15 | 5.65 | 3.65 | 3.05 | 8.31 | 5.19 | 6.40 | 3.82 | 6.10 | 0.98 | 2.05 | 7.70 | 56.05 |
| Houma | 2.50 | 5.11 | 3.38 | 3.20 | 8.05 | 5.15 | 7.50 | 7.00 | 16.04 | 1.96 | 0.81 | 4.25 | 64.95 |
| Normal for Houma | 4.02 | 4.02 | 3.58 | 3.95 | 3.97 | 5.71 | 8.15 | 7.35 | 6.36 | 4.55 | 3.85 | 5.17 | 60.68 |

* Rainfall recorded at nearby Iberia Livestock Farm. Information for Albania not available.

cane tests at the Houma station are presented in table 2. In agreement with results of all previous tests, C. P. 48/103 gave juice of high quality on the first of October when the first samples were taken. At that time it surpassed C. P. 44/101 in indicated yields of sugar per ton of cane by 21 percent, maintaining its superiority above all others on each sampling date during the season, and averaged 16 percent above C. P. 44/101 when the last samples were taken on December 14. It is no doubt the best early - maturing variety presently available commercially and is especially recommended as a variety to provide cane of acceptable milling quality in the early part of the harvest season.

C. P. 47/193 was included in maturity tests for the first time during 1956. Results of this year's testing indicate that it also will be relatively early maturing, although not as early as C. P. 48/103. On October 1, it was 121 percent of C. P. 44/101 in indicated yields of sugar per ton of cane, and gave juices of better sucrose qualities than C. P. 44/101 on each sampling date except the last one on December 14, when it averaged 97 percent of C. P. 44/101 in sugar per ton of cane. N. Co. 310 performed very much as in the past with the exception that it surpassed C. P. 44/101 slightly earlier in the testing period (November 15) than in 1954 and 1955, but essentially the same as in previous years(4).

Both C. P. 36/105 and C. P. 44/155 produced less sugar per ton of cane than C. P. 44/101 at the beginning of the harvest and during most of the period. C. P. 44/155 surpassed C. P. 44/101 on November 29, and again on December 14. C. P. 36/105 remained below C. P. 44/101 on all sampling dates. In 1955(6) both varieties were higher than the control variety in the beginning of the season and, although C. P. 44/155 remained above C. P. 44/101 throughout the 1955 harvest season, C. P. 36/105 produced relatively less sugar per ton of cane than C. P. 44/101 on each of the last four sampling dates that year. Such was not the case during 1956.

A comparison of 1956 with 1955 reveals that, as has been reported by the industry, cane was more mature at the beginning of harvest than in 1955. In that year indicated yields of C. P. 44/101 on October 1 were approximately 105 pounds of sugar per ton of cane while on the same date during the past season this variety produced approximately 140 pounds of sugar per ton of cane. On the other hand, on December 14, when the last samples were taken,

**TABLE 2.**
**Results of maturity studies with six varieties in plant cane tests at Houma during the period October 1 to December 14, 1956, inclusive.**

| Date of Sampling | Indicated yield of 96° sugar per ton of cane (C.P. 44/101=100): Pounds | % of mean | Relative indicated yield of 96° sugar per ton of cane (C. P. 44/101 = 100) VARIETY: C. P. 36/105 | C. P. 44/155 | C. P. 47/193 | C. P. 48/103 | N. Co. 310 | Total of all varieties |
|---|---|---|---|---|---|---|---|---|
| October 1 | 140.0 | 75.7 | 98 | 90 | 121 | 131 | 98 | 77.0 |
| October 15 | 163.4 | 88.4 | 94 | 89 | 113 | 124 | 98 | 87.1 |
| November 1 | 172.2 | 93.1 | 99 | 96 | 120 | 131 | 111 | 97.7 |
| November 15 | 198.9 | 107.6 | 93 | 96 | 105 | 118 | 108 | 106.4 |
| November 29 | 200.4 | 108.4 | 93 | 108 | 107 | 120 | 110 | 110.2 |
| December 10 | 210.2 | 113.7 | 87 | 97 | 107 | 114 | 104 | 110.5 |
| December 14 | 209.5 | 113.3 | 89 | 102 | 97 | 116 | 110 | 111.1 |

there were very little differences in the analyses of any one variety for the 2 years. It is of interest to note that in the same length of time, approximately 75 days, relative daily increases in yield were 1.5 pounds in 1955 and 0.93 pound in 1956. The initial analyses were considerably higher in 1956 and, consequently, average yields for the year were higher than in 1955.

The freezes of November 22, 23, 25, 27, 28, and 30, especially on November 27 and again on November 30, when a low of 24°F. was recorded at Houma, killed terminal

**TABLE 3.**
**Results of plant cane variety tests on light soils in Louisiana during 1956.**

| Variety | Mary (Raceland)1/ 12-11 4/ | Oaklawn (Franklin)2/ 11-28 | Levert-St.John (St.Martinville)3/ 11-27 | Bon Secour (St.James)1/ 11--20 | Average |
|---|---|---|---|---|---|
| | Average yield of cane per acre (tons) | | | | |
| N. Co. 310 | 26.32 | 33.54 | 27.14 | 26.43 | 28.36 |
| C.P. 44/101 | 27.96 | 28.05 | 27.65 | 27.60 | 27.82 |
| C.P. 52/68 | 26.42 | 28.79 | 24.47 | 27.43 | 26.78 |
| C.P. 52/16 | 30.13 | 29.11 | 28.36 | 25.91 | 28.38 |
| C.P. 36/105 | 26.26 | 27.86 | 31.26 | 27.12 | 28.13 |
| C.P. 36/13 | 24.53 | 29.73 | 26.61 | 23.19 | 26.02 |
| C.P. 48/117 | 25.88 | 33.20 | 28.25 | 24.41 | 27.94 |
| C.P. 50/40 | 25.51 | 27.54 | 24.03 | 22.47 | 24.89 |
| C.P. 43/47 | 27.36 | 24.39 | 24.58 | 24.58 | 25.23 |
| C.P. 48/103 | 21.45 | 23.99 | 20.12 | 23.16 | 22.18 |
| C.P. 52/67 | 25.86 | 22.67 | 29.11 | 24.81 | 25.61 |
| Co. 290 | - | 31.11 | 32.58 | - | 31.85 6/ |
| C.P. 52/38 | 22.61 | 29.86 | 25.51 | 19.62 | 24.40 |
| C.P. 52/37 | 30.43 | 27.67 | 22.64 | 22.71 | 25.86 |
| C.P. 47/193 | 22.05 | 23.20 | 22.70 | 20.23 | 22.05 |
| C.P. 44/155 | 26.77 | 21.79 | 21.44 | 24.43 | 23.61 |
| C.P. 29/116 | 24.55 | 31.94 | 25.87 | 27.64 | 27.50 |
| C.P. 29/320 | 21.93 | - | - | 17.35 | 19.64 6/ |
| Difference | | | | | |
| For P. = .05 | 4.33 | 4.18 | 4.31 | 3.87 | 3.43 7/ |
| For P. = .01 | 5.78 | 5.58 | 5.76 | 5.16 | 4.58 |
| | Average indicated yield of 96° sugar per ton of cane (pounds) 5/ | | | | |
| N. Co. 310 | 224.2 | 176.9 | 209.7 | 223.3 | 206.5 |
| C.P. 44/101 | 198.9 | 186.6 | 193.5 | 206.8 | 196.4 |
| C.P. 52/68 | 194.3 | 180.1 | 209.4 | 223.9 | 201.5 |
| C.P. 52/16 | 169.8 | 178.4 | 191.5 | 205.5 | 185.6 |
| C.P. 36/105 | 179.7 | 181.2 | 187.4 | 197.8 | 186.5 |
| C.P. 36/13 | 202.2 | 173.9 | 188.0 | 208.3 | 191.8 |
| C.P. 48/117 | 184.0 | 158.6 | 171.5 | 207.8 | 178.5 |
| C.P. 50/40 | 199.5 | 175.7 | 188.7 | 236.5 | 198.7 |
| C.P. 43/47 | 196.3 | 185.8 | 185.8 | 214.9 | 195.7 |
| C.P. 48/103 | 217.5 | 210.0 | 211.4 | 244.6 | 221.2 |
| C.P. 52/67 | 191.7 | 187.8 | 184.3 | 194.2 | 189.4 |
| Co. 290 | - | 147.3 | 147.9 | - | 147.6 6/ |
| C.P. 52/38 | 196.1 | 186.6 | 203.9 | 198.5 | 195.7 |
| C.P. 52/37 | 173.4 | 178.7 | 189.1 | 189.0 | 181.7 |
| C.P. 47/193 | 209.4 | 204.3 | 204.5 | 225.0 | 210.3 |
| C.P. 44/155 | 189.5 | 186.6 | 179.5 | 210.6 | 192.0 |
| C.P. 29/116 | 149.4 | 152.3 | 150.6 | 184.9 | 159.5 |
| C.P. 29/320 | 195.2 | - | - | 216.8 | 204.7 6/ |
| Difference | | | | | |
| For P. = .05 | 16.92 | 14.03 | 14.42 | 15.21 | 13.41 7/ |
| For P. = .01 | 22.57 | 18.72 | 19.24 | 20.29 | 17.91 |

(Continued on next page)

TABLE 3—Continued

Results of plant cane variety tests on light soils in Louisiana during 1956.

| Variety | Mary (Raceland)[1] 12-11 | Oaklawn (Franklin)[2] 11-28 | Levert-St.John (St.Martinville)[3] 11-27 | Bon Secour (St. James)[1] 11-20 | Average |
|---|---|---|---|---|---|
| | Average indicated yield of 96° sugar per acre (pounds) | | | | |
| N. Co. 310 | 5902 | 5932 | 5691 | 5901 | 5857 |
| C.P. 44/101 | 5562 | 5235 | 5350 | 5708 | 5464 |
| C.P. 52/68 | 5133 | 5186 | 5123 | 6142 | 5396 |
| C.P. 52/16 | 5117 | 5193 | 5430 | 5324 | 5266 |
| C.P. 36/105 | 4720 | 5047 | 5857 | 5364 | 5247 |
| C.P. 36/13 | 4959 | 5170 | 5003 | 4830 | 4991 |
| C.P. 48/117 | 4762 | 5264 | 4844 | 5072 | 4986 |
| C.P. 50/40 | 5089 | 4840 | 4535 | 5315 | 4945 |
| C.P. 43/47 | 5371 | 4532 | 4568 | 5282 | 4938 |
| C.P. 48/103 | 4666 | 5039 | 4253 | 5664 | 4906 |
| C.P. 52/67 | 4958 | 4258 | 5365 | 4817 | 4850 |
| Co. 290 | - | 4581 | 4818 | - | 4700[6] |
| C.P. 52/38 | 4434 | 5572 | 5202 | 3895 | 4776 |
| C.P. 52/37 | 5277 | 4944 | 4282 | 4293 | 4699 |
| C.P. 47/193 | 4618 | 4740 | 4643 | 4551 | 4638 |
| C.P. 44/155 | 5074 | 4067 | 3848 | 5145 | 4534 |
| C.P. 29/116 | 3667 | 4866 | 3897 | 5111 | 4385 |
| C.P. 29/320 | 4281 | - | - | 3761 | 4021[6] |
| Difference | | | | | |
| For P. = .05 | 786 | 784 | 877 | 842 | 644[7] |
| For P. = .01 | 1048 | 1046 | 1170 | 1124 | 860 |

[1] Mhoon silty clay loam.
[2] Baldwin silty clay loam.
[3] Baldwin very fine sandy loam.
[4] Date of harvest.
[5] Weighted average given for this and subsequent tables.
[6] Average based on results from 2 stations only.
[7] Experimental Error based on Location x Variety interaction term.

buds and most of the "eyes" and leaves, but the increase of approximately 9 pounds in indicated yield of sugar per ton for C. P. 44/101, and the gain of approximately 1 percent (110.2 to 111.1) in the average of all varieties for the same period, are evidence that varieties were still accumulating sugar in this experiment.

## Results of tests on light soils

Tables 3, 4, and 5 give the results of all tests on light soils in plant cane, first stubble, and second stubble, respectively, and table 6 summarizes these results for 8 of the most important varieties. As in the past, N. Co. 310 surpassed all other varieties in yields of sugar per acre in the average of all tests for the 3 crops but was slightly below C. P. 48/103 in the average of the 2 second stubble tests. It outyielded C. P. 44/101 in all but 2 of the comparisons in plant cane, and first and second stubble. In indicated yields of sugar per ton of cane, however, C. P. 44/101 surpassed N. Co. 310 in the 2 second stubble tests, in 4 of the 6 first stubble tests, and in 1 of the 4 plant cane tests. It also outyielded N. Co. 310 in the average of second stubble tests, was 1.6 pounds below that variety in the average of first stubble tests, and was substantially below N. Co. 310 in plant cane tests.

C. P. 47/193 yielded 101 percent of C. P. 44/101 in sugar per acre in all second stubble tests, 97 percent of that variety in first stubble tests, and was substantially below C. P. 44/101 in the average of all plant cane tests, as well as in each individual plant cane test. It produced more sugar per ton of cane than C. P. 44/101 in 11 of the 12 experiments.

# TABLE 4.

## Results of first stubble variety tests on light soils in Louisiana during 1956.

| Variety | Mary (Raceland)1/ 12-14 6/ | Oaklawn (Franklin)2/ 11-5 | Albania (Jeanerette)3/ 10-31 | Levert-St.John (St.Martinville)4/ 11-29 | Alma (Lakeland)5/ 11-12 | Bon Secour (St. James)1/ 11-7 | Average |
|---|---|---|---|---|---|---|---|
| | Average yield of cane per acre (tons) | | | | | | |
| * N. Co. 310 | 32.95 | 35.74 | 37.55 | 31.92 | 35.84 | 30.03 | 34.01 |
| ** C. P. 51/24 | 29.07 | 32.47 | 32.94 | 33.58 | 34.12 | 24.42 | 31.10 |
| * C. P. 44/101 | 34.34 | 32.79 | 36.22 | 36.66 | 31.74 | 25.21 | 32.83 |
| * C. P. 47/193 | 30.92 | 31.01 | 33.51 | 32.68 | 29.56 | 25.74 | 30.57 |
| ** C. P. 47/49 | 34.22 | 37.57 | 29.06 | 35.94 | 28.74 | 26.15 | 31.95 |
| ** C. P. 44/154 | 37.60 | 40.40 | 44.70 | 37.33 | 33.60 | 29.01 | 37.11 |
| ** C. P. 50/41 | 36.57 | 42.60 | 49.83 | 40.90 | - | 38.59 | 41.70 7/ |
| * C. P. 48/103 | 28.13 | 28.30 | 34.14 | 20.62 | 22.23 | 25.52 | 26.49 |
| ** C. P. 36/13 | - | 37.17 | 30.41 | - | 28.26 | 20.21 | 29.15 7/ |
| ** C. P. 51/21 | 29.99 | 27.63 | 29.06 | 28.86 | 27.58 | 23.62 | 27.79 |
| ** C. P. 48/117 | 30.79 | 34.76 | 29.02 | 36.76 | 34.60 | 24.95 | 31.81 |
| ** C. P. 50/40 | 28.23 | 30.72 | 30.87 | 28.99 | 33.19 | 25.74 | 29.62 |
| * C. P. 36/105 | 29.54 | 28.22 | 25.85 | 25.51 | 29.05 | 25.79 | 27.33 |
| * C. P. 50/11 | 24.42 | 31.16 | 28.33 | 30.69 | 35.25 | 28.11 | 29.66 |
| ** C. P. 51/13 | 28.92 | 31.10 | 26.41 | 26.78 | 25.32 | 22.09 | 26.77 |
| * C. P. 44/155 | 27.45 | 29.97 | 31.02 | 27.30 | 21.27 | 17.39 | 25.73 |
| * C. P. 29/116 | 32.29 | 31.77 | 38.18 | 32.76 | 36.94 | 27.22 | 33.19 |
| ** C. P. 51/27 | 29.50 | 31.46 | 27.76 | 24.87 | 22.66 | 21.02 | 26.21 |
| ** C. P. 43/47 | 24.70 | 25.78 | 24.56 | 24.37 | 25.74 | 20.50 | 24.28 |
| Difference For P. = .05 2/ | 3.88 | 5.14 | 3.50 | 2.92 | 5.15 | 2.75 | 3.28 8/ |
| For P. = .01 | 5.29 | 7.02 | 4.64 | 3.98 | 7.04 | 3.75 | 4.55 |
| Difference For P. = .05 10/ | 4.48 | 7.62 | 7.25 | 7.20 | 3.57 | 3.97 | |
| For P. = .01 | 6.44 | 10.76 | 10.24 | 10.24 | 5.04 | 5.60 | |
| | Average indicated yield of 96° sugar per ton of cane (pounds) | | | | | | |
| * N. Co. 310 | 196.7 | 194.5 | 213.0 | 187.1 | 177.4 | 211.0 | 199.4 |
| ** C. P. 51/24 | 210.9 | 202.8 | 228.2 | 193.2 | 209.5 | 223.5 | 210.7 |
| * C. P. 44/101 | 202.2 | 196.7 | 213.7 | 178.1 | 184.6 | 209.5 | 197.0 |
| * C. P. 47/193 | 209.4 | 208.8 | 220.8 | 194.5 | 188.2 | 215.5 | 206.2 |
| ** C. P. 47/49 | 200.7 | 196.5 | 210.5 | 168.4 | 201.1 | 213.1 | 197.1 |
| ** C. P. 44/154 | 182.4 | 167.5 | 165.3 | 148.2 | 158.8 | 191.8 | 168.2 |
| ** C. P. 50/41 | 162.0 | 143.7 | 166.5 | 121.0 | - | 145.0 | 147.2 7/ |
| * C. P. 48/103 | 232.2 | 232.1 | 241.4 | 209.8 | 234.3 | 231.2 | 231.4 |
| ** C. P. 36/13 | - | 202.9 | 219.8 | - | 196.0 | 212.9 | 204.2 7/ |
| ** C. P. 51/21 | 212.1 | 178.7 | 235.5 | 200.9 | 218.9 | 217.8 | 210.7 |
| ** C. P. 48/117 | 199.2 | 188.9 | 193.3 | 153.2 | 165.5 | 209.5 | 182.8 |
| ** C. P. 50/40 | 200.4 | 181.7 | 203.7 | 172.3 | 201.7 | 209.4 | 194.7 |
| * C. P. 36/105 | 197.8 | 210.7 | 207.5 | 187.7 | 190.7 | 205.7 | 199.9 |
| * C. P. 50/11 | 197.7 | 188.1 | 184.8 | 156.7 | 182.1 | 187.4 | 182.2 |
| ** C. P. 51/13 | 197.9 | 181.0 | 202.3 | 173.8 | 188.7 | 231.1 | 194.5 |
| * C. P. 44/155 | 230.5 | 178.1 | 204.0 | 173.3 | 187.8 | 214.2 | 197.2 |
| * C. P. 29/116 | 144.5 | 169.1 | 152.0 | 131.2 | 135.7 | 157.3 | 147.8 |
| ** C. P. 51/27 | 200.4 | 177.2 | 182.9 | 155.9 | 183.5 | 168.2 | 178.9 |
| ** C. P. 43/47 | 194.5 | 189.3 | 196.8 | 178.7 | 193.9 | 207.2 | 193.0 |
| Difference For P. = .05 2/ | 11.57 | 15.23 | 16.34 | 11.50 | 17.75 | 14.54 | 10.98 8/ |
| For P. = .01 | 15.75 | 20.82 | 22.29 | 15.69 | 24.26 | 19.83 | 15.24 |
| Difference For P. = .05 10/ | 22.69 | 24.52 | 26.47 | 22.34 | 30.86 | 22.68 | |
| For P. = .01 | 32.59 | 34.60 | 37.35 | 32.10 | 43.55 | 32.02 | |
| | Average indicated yield of 96° sugar per acre (pounds) | | | | | | |
| * N. Co. 310 | 6482 | 7000 | 7997 | 5972 | 6359 | 6336 | 6781 |
| ** C. P. 51/24 | 6131 | 6586 | 7518 | 6186 | 7147 | 5458 | 6554 |
| * C. P. 44/101 | 6943 | 6449 | 7740 | 6529 | 5860 | 5281 | 6467 |
| * C. P. 47/193 | 6474 | 6475 | 7399 | 6356 | 5564 | 5548 | 6303 |
| ** C. P. 47/49 | 6868 | 7383 | 6118 | 6054 | 5780 | 5572 | 6296 |
| ** C. P. 44/154 | 6860 | 6768 | 7391 | 5533 | 5334 | 5564 | 6242 |
| ** C. P. 50/41 | 5924 | 6123 | 8295 | 4947 | - | 5596 | 6140 7/ |
| * C. P. 48/103 | 6532 | 6568 | 8243 | 4326 | 5208 | 5899 | 6129 |
| ** C. P. 36/13 | - | 7542 | 6685 | - | 5540 | 4303 | 5952 7/ |
| ** C. P. 51/21 | 6360 | 4937 | 6843 | 5798 | 6038 | 5145 | 5854 |
| ** C. P. 48/117 | 6132 | 6565 | 5610 | 5632 | 5728 | 5228 | 5816 |
| ** C. P. 50/40 | 5657 | 5582 | 6289 | 4996 | 6696 | 5390 | 5768 |
| * C. P. 36/105 | 5843 | 5947 | 5364 | 4788 | 5539 | 5305 | 5464 |
| * C. P. 50/11 | 4828 | 5862 | 5236 | 4808 | 6420 | 5267 | 5404 |
| ** C. P. 51/13 | 5723 | 5628 | 5344 | 4655 | 4779 | 5106 | 5206 |
| * C. P. 44/155 | 6328 | 5337 | 6327 | 4732 | 3994 | 3725 | 5074 |
| * C. P. 29/116 | 4666 | 5373 | 5802 | 4298 | 5011 | 4282 | 4905 |
| ** C. P. 51/27 | 5911 | 5576 | 5076 | 3877 | 4158 | 3535 | 4689 |
| ** C. P. 43/47 | 4805 | 4881 | 4834 | 4356 | 4991 | 4247 | 4686 |
| Difference For P. = .05 2/ | 836 | 1185 | 784 | 516 | 983 | 568 | 668 8/ |
| For P. = .01 | 1138 | 1619 | 1069 | 703 | 1344 | 775 | 927 |
| Difference For P. = .05 10/ | 1071 | 1793 | 1365 | 1321 | 1311 | 758 | |
| For P. = .01 | 1539 | 2530 | 1927 | 1899 | 1850 | 1069 | |

(Continued on next page)

**Footnotes—Table 4**

* Averages shown are based on 4 yield determinations at each station.
** Averages shown are based on 2 yield determinations at each station.
[1] Mhoon silty clay loam.
[2] Baldwin silty clay loam.
[3] Baldwin silty loam.
[4] Baldwin very fine sandy loam.
[5] Commerce very fine sandy loam.
[6] Date of harvest.
[7] Average based on an assumed value for missing yield calculated according to Yates formula for determining missing plot values. (Paterson, D. D. Statistical Technique in Agricultural Research. pp. 181-188).
[8] Experimental Error based on Location x Variety interaction term.
[9] Where mean is based on 4 yield determinations.
[10] Where mean is based on 2 yield determinations.

C. P. 36/105 yielded 12 percent less sugar per acre than C. P. 44/101 in the average of all tests but in 2 of the experiments, Bon Secour first stubble and Levert - St. John plant cane, it outyielded C. P. 44/101 in that respect. C. P. 36/13, although below C. P. 44/101 in average yields in all tests, surpassed that variety in sugar per acre in the first stubble test at Oaklawn. C. P. 44/155 and C. P. 29/116 were consistently below C. P. 44/101 in yields of sugar per acre at each location and in the average of all tests.

C. P. 48/103 surpassed C. P. 44/101 in yields of sugar per ton in every experiment and in the average of all tests and was above that variety in sugar per acre in the 2 second stubble tests and in 3 of the 6 first stubble tests. Results of the plant cane tests show that C. P. 44/101 was above C. P. 48/103 in sugar per acre yields at all locations and in the average of all plant cane experiments.

Of the unreleased varieties in first stubble trials, C. P. 51/24 surpassed C. P. 44/101 by 87 pounds of sugar per acre in the average of the 6 tests, and the following compared favorably with C. P. 44/101 in that respect: C. P. 47/49, C. P. 50/41, C. P. 51/21, and C. P. 48/117. C. P. 52/68 averaged approximately 99 percent of C. P. 44/101 in yield of sugar per acre and exceeded it by approximately 5 pounds of sugar per ton of cane for all plant cane tests on light soils.

### Results of tests on heavy soils

Tables 7 and 8 give the results of all tests on heavy soils and table 9 summarizes these results for 5 of the most important varieties. N. Co. 310 is the leading variety in yields of sugar per acre in the average of all tests. It surpassed C. P. 44/101 in all the tests except in first stubble at Oaklawn where C. P. 44/101 outyielded N. Co. 310 by 44 pounds of sugar per acre. In the average of all tests that variety averaged 117 percent of sugar per acre and 103 percent of sugar per ton compared with C. P. 44/101.

C. P. 47/193 produced 111 percent of C. P. 44/101 in sugar per acre in first stubble but was only 91 percent in plant cane trials so that in the average of all plant cane and stubble tests it equaled C. P. 44/101 in that respect. C. P. 36/105 averaged 188 pounds of sugar per acre more than C. P. 44/101 in the two plant cane tests but was approximately 67 pounds below that variety in the average of the 4 first stubble experiments. C. P. 29/116 was weak in all tests and yielded considerably less sugar per acre than the other varieties. C. P. 44/154 surpassed C. P. 44/101 by more than 460 pounds of sugar per acre in first stubble, and C. P. 47/49 outyielded C. P. 44/101 by more than 600 pounds of sugar per acre in the same comparisons.

C. P. 52/68 occurred in plant cane only and in these tests it averaged 9 percent more sugar per acre, and approximately 2 percent more sugar per ton, than C. P. 44/101.

### Discussion of Results

C. P. 44/101, the leading variety in commercial acreage in the State

TABLE 5.

Results of second stubble variety tests on light soils in Louisiana during 1956.

| Variety | Mary (Receland) 1/ 2/ 10-24 | Bon Secour (St. James) 1/ 10-17 | Average |
|---|---|---|---|
| | Average yield of cane per acre (tons) | | |
| *C. P. 48/103 | 18.99 | 23.38 | 21.19 |
| *N. Co. 310 | 23.73 | 26.00 | 24.87 |
| **C. P. 47/49 | 24.13 | 22.35 | 23.24 |
| **C. P. 50/28 | 19.68 | 23.42 | 21.55 |
| *C. P. 47/193 | 22.54 | 22.56 | 22.55 |
| *C. P. 44/101 | 19.39 | 23.95 | 21.67 |
| ** C. P. 44/154 | 22.49 | 27.74 | 25.12 |
| **C. P. 50/13 | 22.90 | 25.93 | 24.42 |
| **C. P. 48/117 | 23.95 | 24.97 | 24.46 |
| **C. P. 50/8 | 26.33 | 19.97 | 23.15 |
| *C.P. 36/105 | 16.36 | 22.37 | 19.37 |
| **C.P. 48/154 | 25.99 | 25.73 | 25.86 |
| **C.P. 50/15 | 19.52 | 17.89 | 18.71 |
| **C.P. 50/23 | 21.96 | 15.71 | 18.84 |
| **C.P. 43/47 | 16.63 | 16.94 | 16.79 |
| *C.P. 50/11 | 14.74 | 22.03 | 18.39 |
| **C.P. 44/155 | 17.54 | 13.30 | 15.42 |
| **C.P. 36/13 | 17.45 | 13.79 | 15.62 |
| **C.P. 29/116 | 20.43 | 19.20 | 19.82 |
| **C.P. 48/110 | 10.58 | 19.86 | 15.22 |
| Difference For P. = .05 4/ | 5.28 | 2.49 | 6.51 3/ |
| For P. = .01 | 7.03 | 3.44 | 8.89 |
| Difference For P. = .05 5/ | | 3.37 | |
| For P. = .01 | | 4.61 | |
| | Average indicated yield of 96° sugar per ton of cane (pounds) | | |
| *C. P. 48/103 | 210.3 | 223.0 | 217.3 |
| *N. Co. 310 | 179.5 | 186.0 | 182.9 |
| **C. P. 47/49 | 192.1 | 193.5 | 192.8 |
| **C. P. 50/28 | 211.9 | 202.6 | 206.9 |
| *C. P. 47/193 | 192.1 | 190.1 | 191.1 |
| *C. P. 44/101 | 191.5 | 199.6 | 196.0 |
| ** C. P. 44/154 | 159.8 | 164.6 | 162.4 |
| **C. P. 50/13 | 165.6 | 167.5 | 166.5 |
| **C. P. 48/117 | 174.7 | 155.3 | 164.8 |
| **C. P. 50/8 | 170.2 | 159.8 | 165.7 |
| *C.P. 36/105 | 185.7 | 185.8 | 185.7 |
| **C.P. 48/154 | 142.8 | 134.5 | 138.7 |
| **C.P. 50/15 | 175.8 | 189.0 | 182.1 |

(Continued on next page)

TABLE 5—Continued

Results of second stubble variety tests on light soils in Louisiana during 1956.

| Variety | Mary (Raceland) 1/ 10-24 | Bon Secour (St. James) 1/ 10-17 | Average |
|---|---|---|---|
| Average indicated yield of 96° sugar per ton of cane (pounds) | | | |
| **C.P. 50/23 | 172.6 | 183.2 | 177.0 |
| **C.P. 43/47 | 202.5 | 192.5 | 197.4 |
| *C.P. 50/11 | 164.2 | 177.9 | 172.4 |
| **C.P. 44/155 | 193.2 | 210.0 | 200.5 |
| **C.P. 36/13 | 188.0 | 196.4 | 191.7 |
| **C.P. 29/116 | 130.4 | 150.9 | 140.3 |
| **C.P. 48/110 | 180.1 | 167.4 | 171.8 |
| Difference For P. = .05 4/ | 18.34 | 13.77 | 16.43 3/ |
| For P. = .01 | 24.40 | 19.05 | 22.46 |
| Difference For P. = .05 5/ | | 14.70 | |
| For P. = .01 | | 20.09 | |
| Average indicated yield of 96° sugar per acre (pounds) | | | |
| *C. P. 48/103 | 3994 | 5214 | 4604 |
| *N. Co. 310 | 4260 | 4837 | 4549 |
| **C. P. 47/49 | 4636 | 4325 | 4481 |
| **C. P. 50/28 | 4170 | 4745 | 4458 |
| *C. P. 47/193 | 4331 | 4288 | 4310 |
| *C. P. 44/101 | 3714 | 4781 | 4248 |
| **C. P. 44/154 | 3594 | 4565 | 4080 |
| **C. P. 50/33 | 3792 | 4342 | 4067 |
| **C. P. 48/117 | 4183 | 3878 | 4031 |
| **C. P. 50/8 | 4482 | 3192 | 3837 |
| *C. P. 36/105 | 3038 | 4156 | 3597 |
| **C. P. 48/154 | 3711 | 3461 | 3586 |
| **C. P. 50/35 | 3431 | 3382 | 3407 |
| **C. P. 50/23 | 3790 | 2878 | 3334 |
| **C. P. 43/47 | 3367 | 3261 | 3314 |
| *C. P. 50/11 | 2421 | 3920 | 3171 |
| **C. P. 44/155 | 3389 | 2793 | 3091 |
| **C. P. 36/13 | 3281 | 2708 | 2995 |
| **C. P. 29/116 | 2664 | 2897 | 2781 |
| **C. P. 48/110 | 1905 | 3324 | 2615 |
| Difference 4/ For P. = .05 | 958 | 541 | 1196 3/ |
| For P. = .01 | 1274 | 748 | 1634 |
| Difference 5/ For P. = .05 | | 663 | |
| For P. = .01 | 6/ | 906 | |

(Continued on next page)

**Footnotes—Table 5**

[1] Mhoon silty clay loam.
[2] Date of harvest.
[3] Experimental error based on Location x Variety interaction term.
[4] Difference required for significance when mean is based on 4 yield determinations.
[5] Difference required for significance when mean is based on 2 yield determinations,
[6] All variety means based on 4 yield determinations.
* Averages shown are based on 4 yield determinations at each station.
** Averages shown are based on 2 yield determinations at each station.

## TABLE 6.

**Results of tests with 8 of the most important sugarcane varieties on light soils during 1956, showing averages of plant cane, first and second stubble.**

| Variety and Crop | Yield of cane per acre | Indicated yield of 96° sugar: Per ton of cane* | Per acre | Percent |
|---|---|---|---|---|
| | tons | pounds | pounds | |
| N. Co. 310 (Plant cane) | 28.36 | 206.5 | 5857 | 107 |
| " " (1st stubble) | 34.01 | 199.4 | 6781 | 105 |
| " " (2nd stubble) | 24.87 | 182.9 | 4549 | 107 |
| Average - 3 crops | 29.08 | 197.0 | 5729 | 106 |
| C.P. 44/101 (Plant cane) | 27.82 | 196.4 | 5464 | 100 |
| " " (1st stubble) | 32.83 | 197.0 | 6467 | " |
| " " (2nd stubble) | 21.67 | 196.0 | 4248 | " |
| Average - 3 crops | 27.44 | 196.5 | 5393 | " |
| C.P. 48/103 (Plant cane) | 22.18 | 221.2 | 4906 | 90 |
| " " (1st stubble) | 26.49 | 231.4 | 6129 | 95 |
| " " (2nd stubble) | 21.19 | 217.3 | 4604 | 108 |
| Average - 3 crops | 23.29 | 223.8 | 5213 | 97 |
| C.P. 47/193 (Plant cane) | 22.05 | 210.3 | 4638 | 85 |
| " " (1st stubble) | 30.57 | 206.2 | 6303 | 97 |
| " " (2nd stubble) | 22.55 | 191.1 | 4310 | 101 |
| Average - 3 crops | 25.06 | 202.9 | 5084 | 94 |
| C.P. 36/105 (Plant cane) | 28.13 | 186.5 | 5247 | 96 |
| " " (1st stubble) | 27.33 | 199.9 | 5464 | 84 |
| " " (2nd stubble) | 19.37 | 185.7 | 3597 | 85 |
| Average - 3 crops | 24.94 | 191.2 | 4769 | 88 |
| C.P. 44/155 (Plant cane) | 23.61 | 192.0 | 4534 | 83 |
| " " (1st stubble) | 25.73 | 197.2 | 5074 | 78 |
| " " (2nd stubble) | 15.42 | 200.5 | 3091 | 73 |
| Average - 3 crops | 21.59 | 196.1 | 4233 | 78 |
| C.P. 51/24 (1st stubble) | 31.10 | 210.7 | 6554 | 101 |
| C.P. 52/68 (Plant cane) | 26.78 | 201.5 | 5396 | 99 |

* Weighted averages.

(3), has continued to maintain a high yielding record, and is still the most widely adapted of the released varieties as a general purpose cane. Its good performance on both light and heavy soils, comparatively early maturity, good machine harvesting qualities, and relatively good cold tolerance have been recognized by the industry in according it first place in commercial plantings. The facts that it is earlier in maturity

than N. Co. 310, superior in adaptability to machine harvesting, and more resistant to red rot and mosaic have been taken into consideration in making this choice. Its poorest relative showing has been on the Yahola soil at the Shirley test field (8).

N. Co. 310 surpassed C. P. 44/101 by 6 percent in sugar per acre and outranked all other varieties in that respect in the average of all tests for both light and heavy soils. Its tendency to lodge has limited plantings of it but following hurricane Flossy there were numerous reports

**TABLE 7.**
**Results of plant cane variety tests on heavy soils in Louisiana during 1956.**

| Variety | Greenwood (Thibodaux)[1] 11-16 [3] | Station (Houma)[2] 11-19 | Average |
|---|---|---|---|
| | Average yield of cane per acre (tons) | | |
| N. Co. 310 | 31.85 | 28.07 | 29.96 |
| C. P. 52/68 | 28.00 | 29.15 | 28.58 |
| C. P. 50/40 | 25.28 | 25.81 | 25.55 |
| C. P. 36/105 | 29.69 | 25.86 | 27.78 |
| C. P. 44/101 | 27.07 | 25.89 | 26.48 |
| C. P. 48/117 | 27.93 | 24.28 | 26.11 |
| C.P. 47/193 | 24.85 | 21.91 | 23.38 |
| C. P. 29/116 | 25.47 | 26.39 | 25.93 |
| Difference | | | |
| For P. = .05 | 3.30 | 1.56 | 1.79 [4] |
| For P. = .01 | 4.50 | 2.12 | 2.39 |
| | Average indicated yield of 96° sugar per ton of cane (pounds) | | |
| N. Co. 310 | 183.6 | 224.8 | 202.9 |
| C. P. 52/68 | 186.8 | 200.8 | 193.9 |
| C. P. 50/40 | 190.9 | 220.7 | 205.9 |
| C. P. 36/105 | 180.3 | 199.2 | 189.1 |
| C. P. 44/101 | 179.7 | 203.4 | 191.3 |
| C. P. 48/117 | 161.7 | 204.6 | 181.6 |
| C. P. 47/193 | 185.8 | 208.4 | 196.4 |
| C. P. 29/116 | 139.6 | 173.5 | 156.8 |
| Difference | | | |
| For P. = .05 | 19.65 | 13.70 | 11.60 [4] |
| For P. = .01 | 26.79 | 18.69 | 15.53 |
| | Average indicated yield of 96° sugar per acre (pounds) | | |
| N. Co. 310 | 5849 | 6311 | 6080 |
| C. P. 52/68 | 5230 | 5852 | 5541 |
| C. P. 50/40 | 4826 | 5695 | 5261 |
| C. P. 36-105 | 5353 | 5152 | 5253 |
| C. P. 44/101 | 4864 | 5265 | 5065 |
| C. P. 48/117 | 4516 | 4968 | 4742 |
| C. P. 47/193 | 4617 | 4565 | 4591 |
| C. P. 29/116 | 3556 | 4578 | 4067 |
| Difference | | | |
| For P. = .05 | 640 | 404 | 366 [4] |
| For P. = .01 | 872 | 550 | 490 |

[1] Sharkey clay.
[2] Sharkey silty clay loam.
[3] Date of harvest.
[4] Experimental Error based on Location x Variety interaction term.

TABLE 8.

Results of first stubble variety tests on heavy soils in Louisiana during 1956.

| Variety | Greenwood (Thibodaux)[1] 10-22 [4] | Oaklawn (Franklin)[2] 11-6 | Elm Hall (Napoleonville)[1] 11-8 | Station (Houma)[3] 11-2 | Average |
|---|---|---|---|---|---|
| | Average yield of cane per acre (tons) | | | | |
| N. Co. 310 | 27.59 | 24.60 | 26.52 | 32.97 | 27.92 |
| C.P. 47/49 | 24.94 | 23.21 | 24.83 | 28.24 | 25.31 |
| C.P. 47/193 | 23.13 | 24.53 | 26.13 | 26.12 | 24.98 |
| C.P. 44/154 | 24.69 | 27.65 | 26.83 | 29.19 | 27.09 |
| C.P. 44/101 | 19.90 | 25.02 | 23.99 | 28.81 | 24.43 |
| C.P. 48/117 | 25.98 | 23.92 | 25.20 | 25.93 | 25.26 |
| C.P. 36/105 | 17.79 | 22.04 | 20.19 | 21.85 | 20.47 |
| C.P. 50/11 | 19.32 | 20.83 | 21.43 | 12.79 | 18.59 |
| C.P. 29/116 | 16.06 | 23.31 | 22.71 | 22.90 | 21.25 |
| Difference | | | | | |
| For P. = .05 | 5.13 | 3.64 | 3.32 | 4.39 | 1.99[5] |
| For P. = .01 | 6.98 | 4.94 | 4.49 | 5.95 | 2.64 |
| | Average indicated yield of 96° sugar per ton of cane (pounds) | | | | |
| N. Co. 310 | 166.1 | 201.6 | 191.8 | 199.8 | 190.0 |
| C.P. 47/49 | 191.9 | 218.8 | 210.4 | 210.6 | 207.8 |
| C.P. 47/193 | 194.6 | 211.9 | 200.5 | 216.2 | 206.0 |
| C.P. 44/154 | 174.6 | 201.1 | 183.2 | 191.9 | 188.2 |
| C.P. 44/101 | 175.2 | 200.0 | 174.6 | 203.1 | 189.6 |
| C.P. 48/117 | 166.4 | 190.0 | 173.6 | 197.9 | 181.9 |
| C.P. 36/105 | 178.1 | 203.0 | 194.3 | 196.0 | 193.6 |
| C.P. 50/11 | 180.7 | 198.9 | 174.4 | 209.9 | 189.1 |
| C.P. 29/116 | 162.6 | 166.2 | 157.2 | 166.2 | 163.1 |
| Difference | | | | | |
| For P. = .05 | 16.00 | 10.05 | 14.08 | 16.40 | 6.88[5] |
| For P. = .01 | 21.77 | 13.64 | 19.10 | 22.23 | 9.11 |
| | Average indicated yield of 96° sugar per acre (pounds) | | | | |
| N. Co. 310 | 4582 | 4960 | 5087 | 6587 | 5304 |
| C.P. 47/49 | 4787 | 5078 | 5224 | 5948 | 5259 |
| C.P. 47/193 | 4501 | 5197 | 5240 | 5648 | 5147 |
| C.P. 44/154 | 4311 | 5561 | 4916 | 5602 | 5098 |
| C.P. 44/101 | 3487 | 5004 | 4189 | 5850 | 4633 |
| C.P. 48/117 | 4322 | 4550 | 4374 | 5132 | 4595 |
| C.P. 36/105 | 3169 | 4475 | 3922 | 4283 | 3962 |
| C.P. 50/11 | 3492 | 4143 | 3738 | 2685 | 3515 |
| C.P. 29/116 | 2612 | 3874 | 3569 | 3806 | 3465 |
| Difference | | | | | |
| For P. = .05 | 952 | 718 | 796 | 813 | 394[5] |
| For P. = .01 | 1296 | 974 | 1080 | 1102 | 522 |

[1] Sharkey clay.
[2] Alligator clay; brown surface phase.
[3] Sharkey silty clay loam.
[4] Date of harvest.
[5] Experimental Error based on Location x Variety interaction term.

that, although N. Co. 310 was severely lodged, it was not as difficult or expensive to harvest mechanically as C. P. 36/105 which, because of its brittleness, snapped and broke badly. While there were no reports that N. Co. 310 was as easy to harvest as C. P. 44/101, the general experience was that the new Thomson attachment for gathering lodged cane picked up N. Co. 310 with much less difficulty than was anticipated. Because of its consistent high yields and tolerance of cold, N. Co. 310 is being increased in acreage; there are areas where it can be increased advantageously. The growers' fear of lodged cane

TABLE 9.

**Results of tests with 5 of the most important sugarcane varieties on heavy soils during 1956, showing averages of plant cane and first stubble.**

| Variety and Crop | Yield of cane per acre | Indicated yield of 96° sugar: Per ton of cane* | Per acre | Percent |
|---|---|---|---|---|
| | tons | pounds | pounds | |
| N. Co. 310 (Plant cane) | 29.96 | 202.9 | 6080 | 120 |
| " " (1st stubble) | 27.92 | 190.0 | 5304 | 114 |
| Average - 2 crops | 28.94 | 196.7 | 5692 | 117 |
| C. P. 47/193 (Plant cane) | 23.38 | 196.4 | 4591 | 91 |
| " " (1st stubble) | 24.98 | 206.0 | 5147 | 111 |
| Average - 2 crops | 24.18 | 201.4 | 4869 | 100 |
| C. P. 44/101 (Plant cane) | 26.48 | 191.3 | 5065 | 100 |
| " " (1st stubble) | 24.43 | 189.6 | 4633 | 100 |
| Average - 2 crops | 25.46 | 190.5 | 4849 | 100 |
| C. P. 36/105 (Plant cane) | 27.78 | 189.1 | 5253 | 104 |
| " " (1st stubble) | 20.47 | 193.6 | 3962 | 86 |
| Average - 2 crops | 24.13 | 191.0 | 4608 | 95 |
| C. P. 52/68 (Plant cane) | 28.58 | 193.9 | 5541 | 109 |

* Weighted averages.

has been reduced some, but this, its relative late maturity, and disease susceptibility should not be ignored.

C. P. 48/103 is finding a place on many farms because of its exceptional maturing qualities and relatively good yields of cane per acre at some locations. At the Albania test field, for example, this variety has consistently outyielded C. P. 44/101 in sugar per acre and could profitably replace it on a considerable acreage at that location and on some of the better soils in the State. On the other hand, its performance has been poor at Levert - St. John in St. Martin Parish. C. P. 48/103, because of its relatively slow growth in the spring and poor shading ability, is not a vigorous weed fighter and more attention will have to be given to weed control by other means where the variety is grown.

Although C. P. 47/193 averaged 97 percent and 100 percent of C. P. 44/101 on light and heavy soils, respectively, it is not anticipated that the variety will ever occupy any substantial acreage in Louisiana. Its relatively small barrel and poor early shading are disadvantages which will limit its usefulness. Relatively early maturing qualities and good stubbling qualities, especially on heavy soils, are points in its favor, however, and some increase of the variety, especially in heavy soils, would be justified.

As noted earlier, C. P. 36/105, which occupied second place in sugarcane acreage in the State(3), has yielded better than C. P. 44/101 in some tests and is still preferred by some growers. However, its general average yields of cane and sugar are substantially below those of C. P. 44/101 and N. Co. 310.

C. P. 52/68, presently at the secondary stations, is the most promising of the unreleased varieties in advanced tests, and its performance in plant cane experiments on both light and heavy soils is in agreement with results of earlier tests at the Houma station where it has exceeded C. P. 44/101 by approximately

2 percent in sugar per ton and by 3 percent in sugar per acre on light soils (data not shown). It has an erect growth habit and a spreading top that shades better than C. P. 44/101, but not as well as N. Co. 310. It is slightly larger than C. P. 44/101 in stalk diameter but slightly higher in fiber content.

With heat treatment of seed cane for the control of stunting disease, variety responses in future tests may be different from the results hitherto reported. Plant cane results given in table 3 reflect the response of treated seed because all these experiments had been planted with progeny of treated seed. Varieties such as C. P. 43/47 and C. P. 36/105 which have shown increases due to heat treatment(7) were relatively higher in yields of cane per acre in 1956 than in previous plant cane tests (data not shown). It is also apparent that, in agreement with published results(7), relative yields of sugar per ton are lower so that the net increases in yields of sugar per acre are not in proportion to the increase in tonnage.

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* The outfield testing program is cooperative with the Louisiana Agricultural Experiment Station.


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**RAW SUGAR AND BLACKSTRAP MOLASSES**

# SUGARCANE FERTILIZATION

*D. S. Byrnside, Jr., and M. B. Sturgis* *

In 1956 nine sugar cane fertilizer experiments were conducted. Five of these experiments were with plant cane and four were with stubble cane. As noted in the tables, ammonium nitrate, anhydrous ammonia and aqua ammonia were the sources of N. 20 per cent superphosphate and phosphoric acid in Flo-Mix were the sources of $P_2O_5$ and 60 per cent muriate of potash and a solution of muriate of potash in Flo-Mix were the sources of $K_2O$. The data in Table 1 show the monthly rainfall for April 1-October 1 and the annual rainfall for 1956. The annual rainfall for 1955 and the rainfall for April 1-October 1, 1955 are also given.

**Fertilizer Studies with Plant Cane**

Data in Table 2 show results from a study with C. P. 44-101 plant cane on Patoutville silt loam at Vaufrey Plantation. Flo-Mix, a commercial liquid fertilizer, was used in comparison with corresponding treatments containing nitrogen and minerals from the solid materials. In this experiment the fertilizers were placed in the off-bar furrow and covered immediately. The 60-40-60 treatment from solid materials produced the highest yields of cane, 27.67 tons, and sugar, 6249 pounds. This yield of cane was not significantly better than that from the 60-40-60-Flo-Mix treatment, and the yield of sugar from the solid material was not significantly better than the yield received from the 60-40-60-Flo-Mix treatment. While the yields of cane from the 60-40-60 treatments were significantly better than those from other treatments, the yield of sugar from these treatments were not better than the yield from the 80-40-60 treatment. The treatments containing nitrogen, phosphorus and potassium produced more tons of cane and more pounds of sugar per acre than did the treatments which contained only nitrogen. A soil analysis showed that both the easily-soluble phosphorus and exchangeable potassium were low.

Table 3 contains data from a study with C. P. 44-101 plant cane on Richland silt loam at Young's Industries, Inc. The highest yields of cane, 21.33 tons, and sugar, 4282 pounds, were produced by the 80-40-60 treatment. This yield of cane was significantly better than that from any other treatment, however, the yield of sugar was not significantly better than the yield from the 80-0-60 treatment. The treatments containing nitrogen, phosphorus and potassium yielded significantly more tons of cane per acre than did the treatments which contained nitrogen alone. Approximately equal increases in yield were received from the liquid fertilizer treatment as was received from corresponding treatments in which the plant food was added from solid sources. A soil analysis showed that the easily-soluble phosphorus was low.

Results from a study with C. P. 44-154 plant cane on Iberia silty clay loam at Cherry Grove Plantation are shown in Table 4. The highest yields of cane, 29.81 tons, and sugar, 4548 pounds per acre, were received from the 40-40-60 treatment. The increase in yields from applied fertilizers amounted to 7.16 tons of cane and 1241 pounds of sugar per acre. The exchangeable potassium in the soil was low.

Data in Table 5 show results from a study with C. P. 44-101 plant cane on Baldwin silt loam at Alice "B" Plantation. In this experiment, the 40-40-60 treatment gave the highest yields of cane, 32.43 tons, and sugar, 5623 pounds per acre. The increase in yield from applied fertilizers amounted to 7.10 tons of cane and 1449 pounds of sugar per acre. The soil was low in easily-soluble phos-

TABLE 1

Precipitation at various locations where sugar cane fertilizer experiments were conducted, 1956.

| | Experiment Locations | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Young's Industries, Inc. | Cherry Grove Plantation | Alice "B" Plantation | Katy Plantation | Little Texas Plantation | Smithfield Plantation | Pecan Tree Plantation | Billeaud Plantation |
| Month | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. |
| January | 2.30 | 3.40 | 1.50 | 3.25 | 3.68 | 3.53 | 3.17 | 2.53 |
| February | 9.16 | 11.80 | 4.44 | 6.55 | 7.42 | 11.05 | 4.74 | 8.37 |
| March | 3.53 | 2.40 | 0.50 | 2.75 | 3.63 | 2.57 | 3.61 | 4.29 |
| April | 1.79 | 1.90 | 2.50 | 2.20 | 3.95 | 3.20 | 3.77 | 1.98 |
| May | 3.52 | 5.70 | 5.44 | 9.95 | 8.03 | 3.12 | 7.35 | 3.00 |
| June | 6.55 | 6.20 | 1.19 | 2.20 | 6.48 | 2.94 | 8.53 | 7.86 |
| July | 5.08 | 6.90 | 6.44 | 4.65 | 5.37 | 6.53 | 6.43 | 3.42 |
| August | 6.13 | 7.10 | 2.50 | 8.90 | 2.82 | 4.27 | 6.76 | 6.47 |
| September | 3.11 | 3.50 | 1.00 | 5.40 | 7.45 | 1.45 | 12.70 | 3.03 |
| October | 1.55 | 1.10 | 0.13 | 3.60 | 1.49 | 0.65 | 2.99 | 2.37 |
| November | 5.60 | 0.00 | 1.75 | 4.45 | 3.25 | 1.43 | 1.60 | 7.36 |
| December | 7.98 | 7.00 | 5.44 | 6.60 | 8.14 | 4.06 | 5.76 | 9.42 |
| Rainfall 1956 | 56.30 | 57.00 | 32.83 | 60.50 | 61.71 | 44.80 | 67.41 | 60.10 |
| Total April 1-October 1, 1956 | 26.18 | 31.30 | 19.07 | 33.30 | 34.10 | 21.51 | 45.54 | 25.76 |
| Rainfall 1955 | 61.84 | 61.29 | 51.07 | 69.05 | 61.01 | 55.00 | 52.34 | 62.51 |
| Total April 1-October 1, 1955 | 40.42 | 39.39 | 36.91 | 51.35 | 41.32 | 30.63 | 33.15 | 37.00 |

The above data was supplied by the managers of the various plantations.

phorus and exchangeable potassium.

### Fertilizer Ratio Studies with Stubble Cane

Table 6 contains data from a study with first stubble of C. P. 36-13 on Iberia silt loam at Katy Plantation. The 100-0-60 treatment gave the highest yield of cane, 25.49 tons, and sugar, 4696 pounds per acre. These yields were significantly higher than those from any other treatment. All treatments in which the applications of nitrogen were split produced more cane and sugar

TABLE 2

**Effect of fertilizers on the yield of sugar cane and sugar on Patoutville silt loam at Vaufrey Plantation, Jeanerette, Iberia Parish, Louisiana, 1956.**

| Pounds per acre $N-P_2O_5-K_2O$ | Tons cane per acre | Normal Juice | | | Pounds sugar per acre |
|---|---|---|---|---|---|
| | | Brix | Sucrose | Purity | |
| 0-0-0 | 18.08 | 19.21 | 15.73 | 81.88 | 3983 |
| 40-0-0 | 21.82 | 19.17 | 15.66 | 81.66 | 4783 |
| 40-0-60 | 22.31 | 18.86 | 15.40 | 81.64 | 4792 |
| 40-40-60 | 24.36 | 19.02 | 15.53 | 81.63 | 5294 |
| 60-0-0 | 22.95 | 19.21 | 15.71 | 81.77 | 5051 |
| 60-0-0-FM[1] | 22.60 | 19.40 | 15.93 | 82.10 | 4938 |
| 60-0-60 | 25.37 | 18.69 | 15.41 | 82.44 | 5458 |
| 60-0-60-FM[1] | 25.20 | 19.24 | 15.91 | 82.68 | 5630 |
| 60-40-60 | 27.67 | 19.57 | 16.04 | 81.96 | 6249 |
| 60-40-60-FM[1] | 26.92 | 19.10 | 15.75 | 82.45 | 5967 |
| 80-0-0 | 24.47 | 18.96 | 15.64 | 82.50 | 5359 |
| 80-0-60 | 23.88 | 19.03 | 15.68 | 82.38 | 5248 |
| 80-40-60 | 25.83 | 19.20 | 15.82 | 82.37 | 5734 |

[1] Flo-Mix is a commercial liquid fertilizer. These treatments were fertilized April 28, 1956.

Variety: C. P. 44-101, plant cane; fertilized April 20 and April 28, 1956; harvested December 1-2, 1956.

Least difference necessary for significance was 1.70 tons of cane and 561 pounds of sugar per acre.

Juice analyses of Duhe & Bourgeois Factory, Jeanerette, La.

The soil contains: Total N. 0.069%; Organic C, 0.688%; Exchangeable K, 55 ppm; Exchangeable Na, 52 ppm; Exchangeable Ca, 473 ppm; Exchangeable Mg, 139 ppm; Easily-soluble P, 13 ppm. The soil pH was 5.3.

than did the corresponding non-split treatments. The 80-0-0 and 80-60-40 treatments in which the applications of nitrogen were split yielded significantly more cane than did the corresponding non-split treatments. The most productive treatment, 100-0-60, did not have a corresponding non-split comparison. In splitting the applications of nitrogen, half of the ammonia was placed in the off-bar furrow in early spring. The other half of the ammonia was applied at or just before the last cultivation. A soil analysis showed the exchangeable potassium and easily-soluble phosphorus were low.

Results from a fertilizer ratio study with C. P. 36-105 second stubble on Mhoon loam at Little Texas plantation are given in Table 7. The 120-40-60 treatment produced 23.93 tons of cane, which was a significantly better yield than that obtained from any other treatment. The yield of sugar from this treatment, 4685 pounds, was not statistically better than that from the 100-40-60 non-split treatment or from the 120-40-60 and 120-0-0 treatments in which the applications of nitrogen were split. The 120-0-0

**TABLE 3**

**Effect of fertilizers on the yield of sugar cane and sugar on Richland silt loam at Young's Industries, Inc., Youngsville, Lafayette Parish, Louisiana, 1956.**

| Pounds per acre $N-P_2O_5-K_2O$ | Tons cane per acre | Normal Juice | | | Pounds sugar per acre |
|---|---|---|---|---|---|
| | | Brix | Sucrose | Purity | |
| 0-0-0 | 15.23 | 17.64 | 14.18 | 80.45 | 2967 |
| 40-0-0 | 16.31 | 17.27 | 13.93 | 80.76 | 3111 |
| 40-0-60 | 17.02 | 17.21 | 13.89 | 80.79 | 3236 |
| 40-40-60 | 17.37 | 17.41 | 14.13 | 81.26 | 3375 |
| 60-0-0 | 17.82 | 17.30 | 13.78 | 79.77 | 3358 |
| 60-0-0-FM[1] | 17.78 | 16.91 | 13.22 | 78.27 | 3191 |
| 60-0-60 | 18.33 | 17.27 | 13.85 | 80.32 | 3475 |
| 60-40-60 | 18.81 | 17.56 | 14.34 | 81.69 | 3719 |
| 60-40-60-FM[1] | 18.77 | 17.21 | 13.88 | 80.79 | 3564 |
| 80-0-0 | 19.74 | 17.49 | 14.08 | 80.67 | 3817 |
| 80-0-60 | 20.23 | 17.50 | 14.14 | 80.79 | 3932 |
| 80-40-60 | 21.33 | 17.69 | 14.54 | 82.31 | 4282 |

[1] Flo-Mix is a commercial liquid fertilizer. 60 pounds of nitrogen as anhydrous ammonia was applied to all of these plots on April 7, 1956. 40 pounds of $P_2O_5$ and 60 pounds of $K_2O$ as Flo-Mix was applied on May 17, 1956.

Variety: C. P. 44-101, plant cane; fertilized April 7, April 23 and May 17, 1956; harvested December 4-5, 1956.

Least difference necessary for significance was 0.70 tons of cane and 439 pounds of sugar per acre.

Juice analyses by Youngsville Factory, Youngsville, La.

The soil contains: Total N, 0.098%; Organic C, 1.043%; Exchangeable K, 102 ppm; Exchangeable Na, 30 ppm; Exchangeable Ca, 598 ppm; Exchangeable Mg, 128 ppm; Easily-soluble P, 39 ppm. The soil pH was 5.0.

treatment in which the application of nitrogen was split gave yields of cane and sugar which were significantly better than the corresponding non-split treatment. With this exception, the treatments involving the practice of splitting the nitrogen applications did not give yields of cane or sugar which were better than those from the corresponding non-split treatments. The soil analysis showed that easily-soluble phosphorus was relatively high and that exchangeable potassium was low. The root zone in the soil was deep and the rainfall during the growing season was high.

Data in Table 8 show results from a study with second stubble of C. P. 36-105 on Commerce very fine sandy loam at Smithfield Plantation. In this experiment the practice of splitting the applications of nitrogen was no better than applying all of the nitrogen in the off-bar furrow. There was a tendency toward response to applications of potassium with all levels of nitrogen, and, at the 80 and 100 pound levels of nitrogen, the yield of cane as affected by nitrogen with potassium was significantly better than from nitrogen

TABLE 4

**Effect of fertilizers on the yield of sugar cane and sugar on Iberia silty clay loam at Cherry Grove Plantation, Jeanerette, Iberia Parish, Louisiana, 1956.**

| Pounds per acre N--$P_2O_5$-$K_2O$ | Tons cane per acre | Normal Juice | | | Pounds sugar per Acre |
|---|---|---|---|---|---|
| | | Brix | Sucrose | Purity | |
| 0-0-0 | 22.65 | 15.37 | 11.14 | 72.42 | 3307 |
| 40-0-0 | 26.69 | 15.40 | 11.23 | 72.92 | 3938 |
| 40-0-60 | 26.80 | 15.35 | 11.18 | 72.69 | 3919 |
| 40-40-60 | 29.81 | 15.65 | 11.55 | 73.72 | 4548 |
| 60-0-0 | 25.39 | 15.66 | 11.42 | 72.85 | 3983 |
| 60-0-60 | 25.81 | 15.71 | 11.61 | 73.86 | 3948 |
| 60-40-60 | 26.58 | 15.21 | 10.88 | 71.53 | 3778 |
| 80-0-0 | 25.62 | 15.51 | 11.28 | 72.55 | 3808 |
| 80-0-60 | 27.71 | 15.41 | 11.24 | 72.82 | 4108 |
| 80-40-60 | 27.28 | 15.15 | 10.92 | 71.96 | 3877 |

Variety: C. P. 44-154, plant cane; fertilizer April 21, 1956; harvested November 28-29, 1956.
Least difference necessary for significance was 2.89 tons of cane.
Juice analyses by Enterprise Factory, Jeanerette, La.
This is a calcareous soil which contained: Total N, 0.196%; Organic C, 2.352%; Exchangeable K, 83 ppm; Exchangeable Na, 35 ppm; Exchangeable Ca, 9629 ppm; Exchangeable Mg, 1152 ppm; Easily-soluble P, 148 ppm. The soil pH was 7.7.

alone. Grass infestation, however, probably masked further responses to additions of potassium. A soil analysis supported the fact that the exchangeable potassium was slightly low. This fact, plus the low rainfall during the growing season, probably accounted for the responses to potassium.

Table 9 contains data from a study with second stubble of C. P. 44-101 on Mhoon loam at Pecan Tree Plantation. The highest yields of cane, 28.46 tons ,and sugar, 5619 pounds per acre, were received from the 80-0-0 treatment in which the applications of nitrogen were split. The practice of splitting the applications of nitrogen had a beneficial effect on the yields of both cane and sugar at the 80 and 160 pound levels of nitrogen but not at the 120 pound level. Pronounced benefits, that have been received in former years from splitting the applications of nitrogen, were not obtained at this location in 1956 due to damage to the cane caused by severe winds and heavy rains associated with Hurricane Flossy on September 23-23. The resulting difficulty involved in harvesting the cane, caused the data to be more erratic than usual. The soil analysis showed that easily-soluble phosphorus and exchangeable potassium were high.

### Fertilizer Studies with a Soybean-Sugar Cane Rotation

In 1955 steps were taken to evaluate the effects of fertilizers and lime on the yields of sugar cane in a soybean-sugar cane rotation. An area of Richland silt loam at Bilieaud Plantation, where responses to minerals and to lime would be expected, was selected for this experi-

TABLE 5

**Effect of fertilizers on the yield of sugar cane and sugar on Baldwin silt loam at Alice "B" Plantation, Franklin, St. Mary Parish, Louisiana, 1956.**

| Pounds per acre $N-P_2O_5-K_2O$ | Tons cane per acre | Normal Juice | | | Pounds sugar per acre |
|---|---|---|---|---|---|
| | | Brix | Sucrose | Purity | |
| 0-0-0 | 25.33 | 15.91 | 12.31 | 77.34 | 4174 |
| 40-0-0 | 27.65 | 16.51 | 13.01 | 78.76 | 4859 |
| 40-0-60 | 28.73 | 16.60 | 13.06 | 78.63 | 5068 |
| 40-40-60 | 32.43 | 16.44 | 12.84 | 78.10 | 5623 |
| 60-0-0 | 27.51 | 16.94 | 13.33 | 78.73 | 4987 |
| 60-0-60 | 29.61 | 16.35 | 12.78 | 78.17 | 5100 |
| 60-40-60 | 30.57 | 16.32 | 12.81 | 78.45 | 5287 |
| 80-0-0 | 29.67 | 16.26 | 12.44 | 76.33 | 5201 |
| 80-0-60 | 30.32 | 17.00 | 13.58 | 79.88 | 5613 |
| 80-40-60 | 30.10 | 15.85 | 12.11 | 76.37 | 4849 |

Variety: C. P. 44-101, plant cane; fertilizer April 28, 1956; harvested December 11-12, 1956.
Least difference necessary for significance was 2.90 tons of cane and 723 pounds of sugar per acre.
Juice analyses by St. Mary Sugar Cooperative, Inc., Jeanerette, La.
The soil contains: Total N, 0.096%; Organic C, 1.027%; Exchangeable K, 67 ppm; Exchangeable Na, 64 ppm; Exchangeable Ca, 1680 ppm; Exchangeable Mg, 685 ppm; Easily-soluble P, 57 ppm. The soil pH was 6.0.

ment. Half the area was limed with dolomitic lime at the rate of 3000 pounds per acre. The other half was not limed. Treatments involving subsoiling were also included in the limed and unlimed portions. These plots were subsoiled to a depth of 14-16 inches. In the treatments involving subsoiling and lime, dolomitic lime at the rate of 1500 pounds per acre was distributed in the profile to a depth of 14-16 inches. Dolomitic lime at the rate of 1500 pounds per acre was also applied on the surface of the soil. The unlimed plots involving subsoiling were subsoiled to a depth of 14-16 inches. The treatments were placed in randomized blocks and replicated four times. These limed and unlimed plots were fertilized with phosphorus and potassium and seeded to Clemson soybeans, strain 24. Table 10 contains data showing the effects of fertilizers and lime on the yields of soybeans. The 0-40-0 limed treatment significantly yielded more tons of soybean plant material than did any other treatment. It can be noted that, while the 0-40-60 treatment with subsoiling and liming gave a yield which was significantly better than the unlimed 0-40-60 treatment with subsoiling, this treatment was not as good as the 0-40-60 or 0-40-0 limed treatments.

The soybeans were turned under on August 20 and the plots planted to sugar cane on October 17, 1955. The variety chosen was C. P. 44-155. Due to an error, F 31-762 was planted on 15 rows down one side of the experiment. These 15 rows

## TABLE 6

**Effect of fertilizers on the yield of sugar cane and sugar on Iberia silt loam at Katy Plantation, Franklin, St. Mary Parish, Louisiana, 1956.**

| Pounds per acre $N-P_2O_5-K_2O$ | Tons cane per acre | Normal Juice | | | Pounds sugar per acre |
|---|---|---|---|---|---|
| | | Brix | Sucrose | Purity | |
| 0-0-0 | 14.93 | 15.55 | 12.55 | 80.73 | 2321 |
| 60-0-0 | 18.42 | 15.93 | 13.28 | 83.32 | 3322 |
| 60-0-60 | 18.61 | 16.37 | 13.65 | 83.42 | 3467 |
| 60-40-60 | 18.73 | 16.35 | 13.41 | 81.99 | 3409 |
| 80-0-0[1] | 18.98 | 16.34 | 13.61 | 83.28 | 3524 |
| 80-0-0[2] | 21.00 | 16.54 | 13.78 | 83.29 | 3954 |
| 80-0-60 | 20.27 | 15.94 | 13.14 | 82.36 | 3610 |
| 80-40-60[1] | 20.77 | 16.02 | 13.16 | 81.97 | 3703 |
| 80-40-60[2] | 22.52 | 16.46 | 13.53 | 82.17 | 4153 |
| 100-0-0[1] | 20.81 | 15.69 | 12.99 | 82.75 | 3655 |
| 100-0-0[2] | 21.20 | 16.24 | 13.46 | 82.86 | 3884 |
| 100-0-60 | 25.49 | 16.18 | 13.51 | 83.46 | 4696 |
| 100-40-60[1] | 22.16 | 15.85 | 13.12 | 82.73 | 3950 |
| 100-40-60[2] | 22.83 | 16.23 | 13.44 | 82.82 | 4176 |

[1] 40 pounds of nitrogen as anhydrous ammonia applied on April 19 and 40 pounds of nitrogen as anhydrous ammonia applied on May 16, 1956.

[2] 50 pounds of nitrogen as anhydrous ammonia applied on April 19 and 50 pounds of nitrogen as anhydrous ammonia applied on May 16, 1956.

Variety: C. P. 36-13, 1st stubble; fertilized April 19 and May 16, 1956; harvested December 6-7, 1956.

Least difference necessary for significance was 1.66 tons of cane and 485 pounds of sugar per acre.

Juice analyses by Columbia Sugar Factory, Franklin, La.

The soil contains: Total N, 0.099%; Organic C, 1.311%; Exchangeable K, 72 ppm; Exchangeable Na, 68 ppm; Exchangeable Ca, 2324 ppm; Exchangeable Mg, 877 ppm; Easily-soluble P, 87 ppm. The soil pH was 6.3.

## TABLE 7

**Effect of fertilizers on the yield of sugar cane and sugar on Mhoon loam at Little Texas Plantation, Napoleonville, Assumption Parish, Louisiana, 1956.**

| Pounds per acre $N-P_2O_5-K_2O$ | Tons cane per acre | Normal Juice | | | Pounds sugar per acre |
|---|---|---|---|---|---|
| | | Brix | Sucrose | Purity | |
| 0-0-0 | 12.11 | 17.37 | 14.20 | 81.74 | 3295 |
| 80-0-0 | 18.14 | 17.30 | 14.12 | 81.62 | 3519 |
| 80-0-0[1] | 17.76 | 17.22 | 14.18 | 82.39 | 3461 |
| 80-0-60 | 18.93 | 17.56 | 14.51 | 82.63 | 3791 |
| 80-40-60 | 20.87 | 17.72 | 14.45 | 81.54 | 4159 |
| 80-40-60[1] | 18.56 | 17.67 | 14.60 | 82.64 | 3746 |
| 100-0-0 | 20.38 | 17.58 | 14.39 | 81.83 | 4040 |
| 100-0-0[2] | 17.25 | 17.18 | 14.18 | 82.51 | 3362 |
| 100-0-60 | 21.34 | 17.13 | 14.11 | 82.39 | 4133 |
| 100-40-60 | 22.26 | 17.64 | 14.41 | 81.68 | 4420 |
| 100-40-60[2] | 18.47 | 17.41 | 14.46 | 83.08 | 3684 |
| 120-0-0 | 18.70 | 17.17 | 14.02 | 81.65 | 3599 |
| 120-0-0[3] | 22.15 | 17.68 | 14.39 | 81.39 | 4391 |
| 120-0-60 | 18.89 | 17.54 | 14.62 | 83.34 | 3812 |
| 120-40-60 | 23.93 | 17.57 | 14.22 | 80.89 | 4685 |
| 120-40-60[3] | 21.80 | 18.17 | 15.06 | 82.89 | 4562 |

(Continued on next page)

**Footnotes—Table 7**

[1] 40 pounds of nitrogen as aqua ammonia applied on April 18 and 40 pounds of nitrogen as aqua ammonia applied on May 18, 1956.
[2] 50 pounds of nitrogen as aqua ammonia applied on April 18 and 50 pounds of nitrogen as aqua ammonia applied on May 18, 1956.
[3] 60 pounds of nitrogen as aqua ammonia applied on April 18 and 60 pounds of nitrogen as aqua ammonia applied on May 18, 1956.
Variety: C. P. 36-105; 2nd stubble; fertilized April 18 and May 18, 1956; harvested November 12-13, 1956.
Least difference necessary for significance was 1.87 tons of cane and 486 pounds of sugar per acre.
Juice analyses by Little Texas Factory, Napoleonville, La.
The soil contains: Total N, 0.076%; Organic C, 0.783%; Exchangeable K, 87 ppm; Exchangeable Na, 56 ppm; Exchangeable Ca, 2545 ppm; Exchangeable Mg, 764 ppm; Easily-soluble P, 265 ppm. The soil pH was 6.9.

**TABLE 8**

**Effect of fertilizers on the yield of sugar cane and sugar on Commerce very fine sandy loam at Smithfield Plantation, Port Allen, West Baton Rouge, Parish, Louisiana, 1956.**

| Pounds per acre $N-P_2O_5-K_2O$ | Tons cane per acre | Normal Juice | | | Pounds sugar per acre |
|---|---|---|---|---|---|
| | | Brix | Sucrose | Purity | |
| 0-0-0 | 13.57 | 17.38 | 13.90 | 79.98 | 2603 |
| 80-0-0 | 18.47 | 17.68 | 13.96 | 78.90 | 3540 |
| 80-0-0[1] | 16.44 | 17.88 | 13.93 | 77.81 | 3127 |
| 80-0-60 | 22.14 | 17.51 | 13.81 | 78.88 | 4177 |
| 80-40-60 | 19.39 | 17.73 | 14.29 | 80.52 | 3821 |
| 80-40-60[1] | 19.78 | 17.91 | 14.01 | 78.22 | 3801 |
| 100-0-0 | 20.59 | 17.53 | 13.94 | 79.50 | 3931 |
| 100-0-0[2] | 21.32 | 18.52 | 14.59 | 78.75 | 4296 |
| 100-0-60 | 22.68 | 16.94 | 13.75 | 81.31 | 4259 |
| 100-40-60 | 23.31 | 17.84 | 13.90 | 77.92 | 4437 |
| 100-40-60[2] | 22.87 | 18.08 | 14.16 | 78.37 | 4453 |
| 120-0-0 | 22.80 | 17.50 | 13.51 | 77.17 | 4198 |
| 120-0-0[3] | 18.73 | 17.77 | 13.71 | 77.14 | 3504 |
| 120-0-60 | 22.74 | 17.68 | 13.78 | 77.93 | 4282 |
| 120-40-60 | 22.49 | 17.14 | 13.23 | 77.16 | 4037 |
| 120-40-60[3] | 19.58 | 17.79 | 13.92 | 78.22 | 3735 |

[1] 40 pounds of nitrogen as aqua ammonia applied on April 16 and 40 pounds of nitrogen as aqua ammonia applied on May 21, 1956.
[2] 50 pounds of nitrogen as aqua ammonia applied on April 16 and 50 pounds of nitrogen as aqua ammonia applied on May 21, 1956.
[3] 60 pounds of nitrogen as aqua ammonia applied on April 16 and 60 pounds of nitrogen as aqua ammonia applied on May 21, 1956.
Variety: C. P. 36-105, 2nd stubble; fertilized on April 16 and May 21, 1956; harvested on October 22-23, 1956.
Least difference necessary for significance was 1.87 tons of cane and 48* pounds of sugar per acre.
Juice analyses by Smithfield Factory, Chamberlain, La.
The soil contains: Total N, 0.065%; Organic C, 0.693%; Exchangeable K, 91 ppm; Exchangeable Na, 42 ppm; Exchangeable Ca, 1696 ppm; Exchangeable Mg, 473 ppm; Easily-soluble P, 347 ppm. The soil pH was 6.0.

could not be included in the study. In 1956 the regular ratio type fertilizer experiment was conducted on both the limed and unlimed portions of the experimental area. The data from the experiment are shown in Table 11. The 60-40-60 limed treatment gave the highest yields of cane, 19.53 tons, and the 60-40-0 limed treatment gave the highest yields of sugar, 3562 pounds per acre. The cane came up to a very poor stand and the plots were very grassy during the growing season. As a result, the yields were erratic and the experimental error so high that significant differences between treatments were not obtained. The high experimental error did not permit the measurement of responses

TABLE 9

**Effect of fertilizers on the yield of sugar cane and sugar on Mhoon loam at Pecan Tree Plantation, Mathews, Lafourche Parish, Louisiana, 1956.**

| Pounds per acre $N-P_2O_5-K_2O$ | Tons cane per acre | Normal Juice | | | Pounds sugar per acre |
|---|---|---|---|---|---|
| | | Brix | Sucrose | Purity | |
| 0-0-0 | 18.07 | 18.28 | 15.17 | 82.96 | 3811 |
| 80-0-0 | 23.16 | 18.52 | 15.42 | 83.29 | 4989 |
| 80-0-0[1] | 28.46 | 17.43 | 14.35 | 82.27 | 5619 |
| 120-0-0 | 26.33 | 18.06 | 14.86 | 82.23 | 5430 |
| 120-0-0[2] | 25.60 | 18.22 | 14.82 | 81.30 | 5260 |
| 160-0-0 | 21.58 | 18.16 | 14.81 | 81.53 | 4431 |
| 160-0-0[3] | 26.48 | 17.57 | 14.24 | 81.04 | 5183 |

[1] 40 pounds of nitrogen as aqua ammonia applied on April 5 and 40 pounds of nitrogen as aqua ammonia applied on May 16, 1956.

[2] 60 pounds of nitrogen as aqua ammonia applied on April 5 and 60 pounds of nitrogen as aqua ammonia applied on May 16, 1956.

[3] 80 pounds of nitrogen as aqua ammonia applied on April 5 and 60 pounds of nitrogen as aqua ammonia applied on May 16, 1956.

Variety: C. P. 44-101, 2nd stubble; fertilizer April 5 and May 16, 1956; harvested November 13-15, 1956.

Least difference necessary for significance was 2.48 tons of cane and 829 pounds of sugar per acre.

Juice analyses by Georgia Factory, Mathews, La.

The soil contains: Total N, 0.103%; Organic C, 0.984%; Exchangeable K, 119 ppm; Exchangeable Na, 44 ppm; Exchangeable Ca, 3163 ppm; Exchangeable Mg, 797 ppm; Easily-soluble P, 339 ppm. The soil pH was 7.0.

to fertilizers, even though phosphorus and potassium were low by chemical tests.

## General Remarks

The results of this year's work continues to show that there is a need for the use of complete fertilizers on sugar cane in areas west of Bayou Teche. Responses to applications of phosphorus and potassium have been obtained from both plant and stubble cane. In 1956 in four out of five experiments with plant cane, responses to phosphorus and potassium were obtained. It should be noted that there is a tendency to receive responses to more nitrogen on plant cane. Response to as much as 80 pounds of nitrogen per acre was obtained from plant cane for the first time.

## Fertilizer Recommendations

Fertilizer recommendations for sugar cane were prepared jointly by the Louisiana Agricultural Experiment Station and the U. S. Department of Agriculture Sugar Station, Houma, Louisiana.

To plant cane on light and medium textured soils apply 40 to 60 pounds of nitrogen per acre by use of any of the common carriers. On heavy textured soils apply 60 to 80 pounds of nitrogen. Where the green weight of legumes turned under ahead of planting cane is as much as 8 to 10 tons per acre, it is not necessary to fertilize plant cane. In most cases the yields of legumes are not this high. *Where poor legume growth has been observed, responses to $P_2O_5$ and $K_2O$ can be expected.*

On stubble cane on the medium textured to heavy alluvial soils of the Mississippi or Red river bottoms, use 80 to 100 pounds of nitrogen per acre. Where known defici-

**TABLE 10**

**Effect of fertilizers on the yields of soybeans in a soybean-sugar cane rotation on limed and unlimed Richland silt loam at Billeaud Plantation, Broussard, Lafayette Parish, Louisiana, 1955.**

| Pounds per acre $N-P_2O_5-K_2O$ | Tons soybeans per acre, dry weight of whole plants |
|---|---|
| LIMED* | |
| 0-0-0 | 2.24 |
| 0-40-0 | 3.71 |
| 0-0-60 | 2.60 |
| 0-40-60 | 3.08 |
| 0-40-60 + subsoiling[1] | 3.07 |
| UNLIMED | |
| 0-0-0 | 2.20 |
| 0-40-0 | 3.13 |
| 0-0-60 | 2.47 |
| 0-40-60 | 2.78 |
| 0-40-60 + subsoiling[2] | 2.62 |
| L. S. D. at 0.05 level | 0.40 |
| L. S..D. at 0.01 level | 0.55 |

* Dolomitic lime applied at rate of 3000 pounds per acre on April 21, 1955.

[1] Subsoiled on April 20, 1955 to depth of 14-16''; 1500 pounds of dolomitic lime per acre distributed in soil profile to depth of 14-16'' and 1500 pounds of dolomitic lime per acre applied on surface of soil.

[2] Subsoiled on April 20, 1955 to a depth of 14-16''.

Variety of soybeans, Clemson, strain 24; planted at rate of 1 bu. per acre on April 22, 1955; fertilized, April 22, 1955; yields taken August 19, 1955; plowed under August 20, 1955; per cent moisture in plant material, 74.49%; per cent dry weight in plant material, 25.51%; planted to C. P. 44-155, October 17, 1955.

The unlimed soil contains: Total N, 0.099%; Organic C, 0.984%; Exchangeable K, 101 ppm; Exchangeable Na, 41 ppm; Exchangeable Ca, 581 ppm; Exchangeable Mg, 170 ppm; Easily-soluble P, 37 ppm. The soil pH was 5.1.

encies of phosphorus and potassium exist, which is usually in the very fine sandy loam and silt loam types, 25 to 40 pounds of $P_2O_5$ and 40 to 60 pounds of $K_2O$ should be applied in addition to nitrogen. In some cases the plant food may be supplied by the application of 500 pounds of 6-8-12, 10-5-10 or 0-10-20 per acre supplemented with 50 to 100 pounds of nitrogen from either solid or liquid materials.

To stubble cane on the medium to light textured soils of the Pleistocene Mississippi terraces, which areas are largely west of the Teche and include the Richland, Olivier and Iberia series, apply 80 to 100 pounds of N. 25 to 40 pounds of $P_2O_5$ and 40 to 60 pounds of $K_2O$.

Nitrogen may be supplied from any commonly available solid or liquid materials. Where anhydrous ammonia is being used to supply

TABLE 11

**Effect of fertilizers on the yields of sugar cane and sugar from a soybean-sugar cane rotation on limed and unlimed Richland silt loam at Billeaud Plantation, Broussard, Lafayette Parish, Louisiana, 1956.**

| Pounds per acre $N-P_2O_5-K_2O$ | Tons cane per acre | Normal Juice | | | Pounds sugar per acre |
|---|---|---|---|---|---|
| | | Brix | Sucrose | Purity | |
| | | | LIMED* | | |
| 0-0-0 | 16.58 | 17.46 | 13.84 | 79.26 | 3136 |
| 40-0-0 | 16.96 | 17.31 | 14.05 | 81.10 | 2947 |
| 40-40-0 | 17.12 | 16.98 | 13.24 | 77.97 | 3072 |
| 40-0-60 | 16.10 | 17.28 | 13.83 | 80.04 | 3044 |
| 40-40-60 | 17.27 | 16.54 | 12.91 | 78.02 | 2992 |
| 40-40-60 + subsoiling[1] | 16.73 | 17.31 | 13.96 | 80.60 | 3199 |
| 60-0-0 | 16.30 | 17.25 | 13.71 | 79.49 | 3047 |
| 60-40-0 | 18.83 | 17.28 | 13.77 | 79.71 | 3562 |
| 60-0-60 | 17.91 | 17.11 | 13.58 | 79.37 | 3304 |
| 60-40-60 | 19.53 | 16.95 | 13.48 | 79.53 | 3560 |
| 60-40-60 + subsoiling[1] | 16.51 | 16.97 | 13.11 | 77.20 | 2923 |
| | | | UNLIMED | | |
| 0-0-0 | 12.91 | 17.20 | 13.98 | 81.27 | 2471 |
| 40-0-0 | 14.37 | 17.01 | 13.41 | 79.06 | 2620 |
| 40-40-0 | 13.70 | 17.20 | 13.78 | 80.09 | 2611 |
| 40-0-60 | 15.23 | 16.98 | 13.43 | 79.07 | 2797 |
| 40-40-60 | 14.82 | 17.42 | 14.14 | 81.18 | 2877 |
| 40-40-60 + subsoiling[2] | 16.03 | 16.59 | 13.00 | 78.32 | 2794 |
| 60-0-0 | 12.76 | 17.00 | 13.54 | 79.51 | 2339 |
| 60-40-0 | 13.71 | 17.17 | 13.48 | 78.46 | 2537 |
| 60-0-60 | 13.19 | 16.96 | 13.61 | 80.19 | 2432 |
| 60-40-60 | 14.22 | 17.34 | 14.09 | 81.22 | 2753 |
| 60-40-60 + subsoiling[2] | 15.84 | 16.96 | 13.16 | 77.57 | 2821 |

* Dolomitic lime applied at rate of 3000 lbs. per acre on April 21, 1955.

[1] Subsoiled to depth of 14-16"; 1500 lbs. of dolomitic lime distributed through soil profile to depth of 16" and 1500 lbs. of dolomitic lime applied on surface.

[2] Subsoiled to depth of 14-16".

Variety: C. P. 44-155, plant cane; fertilized April 30-May 1, 1956; harvested November 21-25, 1956.

Juice analyses by Billeaud Sugar Factory, Broussard, La.

nitrogen, minerals may be applied either before the ammonia or in the same operation from hoppers mounted on the sides of the tractor. The practice of splitting applications of nitrogen to stubble cane on medium textured soils where as much as 80 or more pounds of nitrogen is applied is proving profitable in some cases. Half of the nitrogen can be applied four inches deep in the middles at the last cultivation. Ammonia and other highly soluble carriers of nitrogen are especially adaptable to split applications.

Over a period of years the highest efficiency in extra production of sugar cane from fertilizer nitrogen

(Continued on page 339)

# STUDY DURING 1956 OF THE EFFECTS OF STUNTING DISEASE ON YIELDS OF CANE AND SUGAR IN LOUISIANA

*By C. A. Schexnayder and E. V. Abbott, Plant Pathologists, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture* [1]

Following identification of the stunting disease of sugarcane in Louisiana (1), experiments were undertaken at the U. S. Sugarcane Field Station at Houma to determine the relative losses in yield caused by the disease in the principal commercial and promising unreleased varieties, as well as some of those formerly grown commercially in the State. Seed cane for planting the experiments was progeny of seed treated with hot air at 54°C. for 8 hours to eliminate the stunting disease virus. This was planted in replicated plots in comparison with seed cane from the same original source that had not been heat treated. Results from the plant cane of these experiments were reported last year (5). The combined results from plant cane (1955) and first stubble (1956) for 19 varieties are in tables 1 and 2 of this report.

Relative increases in yields of cane and sugar per acre from heat treatment for the 2 years were similar to those for the plant cane crop, and in general the responses are in line with those being obtained in the commercial heat treatment program in the State. In plant cane, in the average of all varieties, sugar per ton of cane was slightly though significantly higher in the untreated than in the treated cane. In first stubble the differences were smaller, but nevertheless slightly in favor of the untreated cane. This may be because some of the cane in the originally disease-free plots became infected as first stubble.

Milling data for 6 varieties using cane from the stubble plots are in table 3. The milling tests were conducted as described by Arceneaux, Krumbhaar, and Bisland (3). In the average of the 6 varieties normal juice sucrose, normal juice purity, and extraction were slightly but not significantly higher in cane from the untreated as compared with the originally healthy plants.

From a historical standpoint the results in tables 1 and 2 with some of the older commercial varieties are of interest. One object of including them in the experiments was to determine the possible role of stunting disease in their decline, since this disease had not been recognized at the time they were discontinued as commercial canes. Failure of Co. 281 was ascribed primarily to mosaic and root rot, to both of which it is recognized as susceptible. Root rot was considered the primary cause of the failure of C. P. 28/19. This variety is resistant to mosaic, and, although it became infected with this disease to some extent in 2 areas while still grown commercially, mosaic was not a factor in its general decline. P.O.J. 234 is susceptible to, though tolerant of, mosaic, and is classed as resistant to root rot. All 3 varieties are classed as resistant to red rot, and while it sometimes caused moderate injury to C. P. 28/19, red rot was not considered an important factor in the failure of any of them.

C. P. 29/320 ceased to be an important commercial cane because of declining yields, which, although the variety was not highly resistant to red rot or root rot, could not be ascribed primarily to either of these diseases. It is resistant to mosaic. C. P. 34/120 is resistant to mosaic and root rot but is susceptible to

**TABLE 1.**

**Effect of ratoon stunting disease on yields of cane and sugar of 10 present or former commercial varieties of sugarcane on mixed soil (Mhoon silt loam) U. S. Sugarcane Field Station, Houma, La.**

**(Average of 4 replications of 3-row plots 12 ft. long)**

| Variety | Treatment | Cane per acre: Plant cane 1955 | Cane per acre: 1st Stubble 1956 | Sugar per acre: Plant cane 1955 | Sugar per acre: 1st Stubble 1956 | TOTAL OF 2 CROPS: Cane per acre: Yield | Cane per acre: Increase from treatment | TOTAL OF 2 CROPS: Sugar per acre: Yield | Sugar per acre: Increase from treatment |
|---|---|---|---|---|---|---|---|---|---|
| | | tons | tons | Lbs. | Lbs. | tons | % | Lbs. | % |
| Co. 281 | Treated [1] | 31.20 | 27.67 | 4550 | 4502 | 58.87 | 50.1 | 9052 | 55.5 |
| | Untreated | 18.74 | 20.49 | 2579 | 3244 | 39.23 | | 5823 | |
| Co. 290 | Treated | 46.39 | 40.45 | 7363 | 6070 | 86.84 | 24.1 | 13433 | 19.2 |
| | Untreated | 35.40 | 34.60 | 5742 | 5531 | 70.00 | | 11273 | |
| N. Co. 310 | Treated | 42.84 | 38.56 | 7482 | 7654 | 81.40 | 10.0 | 15136 | 9.3 |
| | Untreated | 39.29 | 34.73 | 7169 | 6677 | 74.02 | | 13846 | |
| C.P. 29/116 | Treated | 36.02 | 34.50 | 5556 | 5526 | 70.52 | 9.8 | 11082 | 10.1 |
| | Untreated | 35.22 | 28.99 | 5590 | 4472 | 64.21 | | 10062 | |
| C.P. 29/320 | Treated | 28.32 | 22.83 | 5400 | 4395 | 51.15 | 26.4 | 9795 | 27.7 |
| | Untreated | 21.50 | 18.98 | 4125 | 3543 | 40.48 | | 7668 | |
| C.P. 34/120 | Treated | 36.07 | 28.81 | 6418 | 4833 | 64.88 | 47.7 | 11251 | 42.8 |
| | Untreated | 21.34 | 22.60 | 3778 | 4103 | 43.94 | | 7881 | |
| C.P. 36/105 | Treated | 38.26 | 35.71 | 6159 | 6114 | 73.97 | 55.3 | 12273 | 49.3 |
| | Untreated | 25.49 | 22.14 | 4536 | 3683 | 47.63 | | 8219 | |
| C.P. 43/47 | Treated | 30.79 | 29.81 | 5482 | 5265 | 60.60 | 79.2 | 10747 | 81.8 |
| | Untreated | 16.48 | 17.33 | 2908 | 3005 | 33.81 | | 5913 | |
| C.P. 44/101 | Treated | 37.10 | 36.38 | 6180 | 6918 | 73.48 | -0.1 | 13098 | -0.9 |
| | Untreated | 37.07 | 36.50 | 6499 | 6711 | 73.57 | | 13210 | |
| C.P. 44/155 | Treated | 36.17 | 32.87 | 6604 | 5834 | 69.04 | 44.9 | 12438 | 27.1 |
| | untreated | 25.61 | 22.04 | 5135 | 4652 | 47.65 | | 9787 | |
| L.S.D.- .05 | | 1.59 | 1.70 | 278 | 399 | | | | |

[1] Treated = progeny of seed cane treated with hot air at 54° C. for 8 hours.

red rot, and losses in stand caused by the latter were involved in its decline as a commercial cane.

Louisiana Purple was also included in the plantings made for these experiments, but no yield data were obtained because the stands as plant cane were nearly a complete failure in the plots of both heat-treated and untreated cane. Severe damage by red rot and borers prevented most of the eyes from germinating. This was in spite of the fact that the plots of all of the varieties used as sources of seed were dusted periodically during the growing season with ryania to control borers, and with fungicide (tribasic copper sulfate) in an effort to reduce red rot infection of the growing cane. However, neither red rot nor borers were successfully controlled in this variety, which is very susceptible to both.

The results of a single experiment usually do not provide a good basis for broad generalizations, but since experiments of this kind require a great deal of time (the seed cane was heat treated in 1953 to provide

**TABLE 2.**

**Effect of ratoon stunting disease on yields of cane and sugar of 10 former or present commercial varieties of sugarcane on mixed soil (Mhoon silt loam) U. S. Sugarcane Field Station, Houma, La.**

**(Average of 4 replications of single-row plots 12 ft. long)**

| Variety | Treatment | Cane per acre: Plant cane 1955 | Cane per acre: 1st Stubble 1956 | Sugar per acre: Plant cane 1955 | Sugar per acre: 1st Stubble 1956 | TOTAL OF 2 CROPS: Cane per acre: Yield | Increase from treatment % | Sugar per acre: Yield | Increase from treatment % |
|---|---|---|---|---|---|---|---|---|---|
| | | tons | tons | Lbs. | Lbs. | tons | | Lbs. | |
| P.O.J. 234 | Treated [1/] | 16.33 | 10.28 | 1538 | 1655 | 26.61 | 18.5 | 3193 | 21.4 |
| | Untreated | 14.29 | 8.16 | 1366 | 1264 | 22.45 | | 2630 | |
| C. P. 28/19 | Treated | 29.04 | 28.88 | 4786 | 4998 | 57.92 | 69.9 | 9784 | 53.9 |
| | Untreated | 14.59 | 19.51 | 2771 | 3588 | 34.10 | | 6359 | |
| C.P. 29/103 | Treated | 29.87 | 33.12 | 3710 | 4133 | 62.99 | 16.2 | 7843 | 2.5 |
| | Untreated | 26.70 | 27.52 | 3616 | 4034 | 54.22 | | 7650 | |
| C.P. 29/120 | Treated | 20.49 | 29.34 | 3176 | 5435 | 49.83 | 40.8 | 8611 | 46.3 |
| | Untreated | 15.42 | 19.96 | 2168 | 3719 | 35.38 | | 5887 | |
| C.P. 36/13 | Treated | 43.86 | 43.71 | 8183 | 8906 | 87.57 | 31.6 | 17089 | 23.4 |
| | Untreated | 33.88 | 32.67 | 6603 | 7242 | 66.55 | | 13845 | |
| C.P. 36/183 | Treated | 31.38 | 35.99 | 5091 | 6568 | 67.37 | 47.9 | 11659 | 27.6 |
| | Untreated | 23.22 | 26.62 | 4121 | 5013 | 49.84 | | 9134 | |
| C.P. 44/101 | Treated | 38.56 | 42.80 | 6705 | 7723 | 81.36 | 8.3 | 14428 | 0.3 |
| | Untreated | 32.74 | 42.35 | 5848 | 8538 | 75.09 | | 14386 | |
| C.P. 44/154 | Treated | 39.85 | 49.61 | 5606 | 8237 | 89.46 | 3.2 | 13843 | -8.5 |
| | Untreated | 42.05 | 44.62 | 6853 | 8173 | 86.67 | | 15026 | |
| C.P. 47/193 | Treated | 33.65 | 34.48 | 6307 | 6812 | 68.13 | -6.5 | 13119 | -8.5 |
| | Untreated | 32.82 | 39.77 | 6206 | 8026 | 72.59 | | 14232 | |
| C.P. 48/103 | Treated | 32.36 | 35.69 | 6947 | 7534 | 68.05 | 20.5 | 14481 | 14.5 |
| | Untreated | 28.20 | 28.28 | 6444 | 6204 | 56.48 | | 12648 | |
| L.S.D. - .05 | | 4.53 | 3.78 | 934 | 1078 | | | | |

[1] Treated = progeny of seed cane treated with hot air at 54° C. for 8 hours.

seed for planting the experiments in 1954, from which plant cane results were obtained in 1955), and because of demands of other work can not be carried out on a large scale year after year, it seems justifiable to examine the results obtained thus far for such evidence as they may provide with respect to the original objective, i.e., the role of stunting disease in the commercial decline of these varieties.

From the rather large increases in yields of cane resulting from heat treatment of seed cane of C. P. 28/19, C. P. 29/320, C. P. 34/120, and Co. 281, all of which were at one time major commercial varieties in Louisiana, it seems obvious that stunting disease was involved in their decline. This should not be taken to imply that the other diseases recognized earlier as being responsible for progressive loss of yield capacity were not important, but it does indicate that stunting disease was a factor in their declining yields which was not recognized at the time. This may be concluded not only because yields from treated cane were relatively much higher than those from the untreated in

TABLE 3.

Comparison of normal juice sucrose and purity and of extraction of mill cane of 6 varieties grown from heat treated (healthy) and untreated (diseased) cane. (Yield data in table 1). Average of 2 samples.

| Variety | NORMAL JUICE SUCROSE | | NORMAL JUICE PURITY | | EXTRACTION | |
|---|---|---|---|---|---|---|
| | Healthy | Diseased | Healthy | Diseased | Healthy | Diseased |
| C.P. 29/116 | 11.96 | 11.78 | 78.40 | 77.61 | 78.78 | 78.60 |
| C.P. 36/105 | 12.31 | 12.82 | 78.40 | 80.36 | 76.61 | 75.90 |
| C.P. 43/47[1] | 12.56 | 12.49 | 77.72 | 79.69 | 75.57 | 75.25 |
| C.P. 44/101 | 13.70 | 13.82 | 81.54 | 82.18 | 77.84 | 78.08 |
| Co. 290 | 10.94 | 11.32 | 76.74 | 77.95 | 79.75 | 80.55 |
| N.Co. 310 | 14.06 | 13.34 | 82.26 | 80.72 | 76.37 | 77.16 |
| Average | 12.59 | 12.61 | 79.18 | 79.75 | 77.49 | 77.59 |

[1] One sample.

these experiments, but also because the actual yields of cane were restored by heat treatment to relatively high levels, which were maintained through the stubble crop.

The results with P.O.J. 234 are less definite in pointing toward stunting disease as a decisive factor in its decline. While the yield of cane per acre from treated seed was 18.5 percent greater than that from untreated, actual yields for this variety were below its level of productivity when it was grown commercially (2, 4). The lack of greater response to heat treatment by this variety may have been because of less complete elimination of the virus from it, more spread of the disease into the heat treated plots, or possibly because its yields were influenced by some other unrecognized growth-retarding factor to a greater extent than the other varieties.

The fact that seed rotting caused plant cane stand failure of Louisiana Purple in spite of heat treatment is evidence that diseases affecting the seed piece are still important. The results of these experiments also raise the question of the extent to which the susceptibility of a variety to injury by red rot, root rot, and perhaps other diseases may be influenced by infection with stunting disease. As reported last year (5) stunting disease caused important reductions in germination of several varieties. It is known that anything which retards the germination of the seed cutting and establishment of independent new plants increases the possibility of damage to the seed piece from other diseases, such as red rot or root rot. It is therefore possible that what appears to be a progressively increasing susceptibility of a variety to seed cane or root-rotting diseases may be indirectly the cumulative effect of infection with the stunting disease virus. The interrelationship of stunting disease and other diseases is a question which merits considerable study and one which is under investigation.

Among the current commercial varieties included in the experiments, C. P. 36/105 and C. P. 43/47 showed the greatest response to heat treatment, and both are showing similarly marked increases in yield

**TABLE 4.**

**Effect of ratoon stunting disease (RSD) on yields of C. P. 44/101 over a period of years beginning with seed pieces heat treated in 1953.**

Tons of cane per acre

| Treatment | Plant cane 1954 | | Stubble 1955 | | Plant cane 1955 | | Stubble 1956 | |
|---|---|---|---|---|---|---|---|---|
| | Acre Yield | | Acre Yield | | Acre Yield | | Acre Yield | |
| | Tons | % of A | Tons | % of A | Tons | % of A | Tons | % of A |
| A. Selected "healthy" in 1950 | 33.2 | 100 | 36.7 | 100 | 29.9 | 100 | 34.9 | 100 |
| B. Selected "healthy"; inoc. with RSD 1953 | 22.2 | 67 | 30.5 | 83 | 31.0 | 104 | 35.5 | 102 |
| C. Selected RSD | 27.8 | 84 | 29.3 | 80 | 26.2 | 88 | 33.6 | 96 |
| D. Selected RSD; HWT 50°C. 2 hrs. | 31.2 | 94 | 38.9 | 106 | 37.4 | 125 | 41.7 | 120 |
| **Sugar per ton of cane** | | | | | | | | |
| A. Selected "healthy" in 1950 | 186.7 | 100 | 170.4 | 100 | 176.2 | 100 | 206.4 | 100 |
| B. Selected "healthy"; inoc. with RSD 1953 | 178.3 | 96 | 164.1 | 96 | 176.9 | 100 | 219.6 | 106 |
| C. Selected RSD | 195.9 | 105 | 180.0 | 106 | 184.0 | 104 | 222.8 | 108 |
| D. Selected RSD; HWT 50°C. 2 hrs. | 193.0 | 103 | 161.7 | 95 | 172.4 | 98 | 202.1 | 98 |
| **Sugar per acre** | | | | | | | | |
| A. Selected "healthy" in 1950 | 6193 | 100 | 6261 | 100 | 5265 | 100 | 7194 | 100 |
| B. Selected "healthy"; inoc. with RSD 1953 | 3970 | 64 | 5004 | 80 | 5448 | 103 | 7819 | 109 |
| C. Selected RSD | 5447 | 88 | 5272 | 84 | 4831 | 92 | 7488 | 104 |
| D. Selected RSD; HWT 50°C. 2 hrs. | 6012 | 97 | 6283 | 100 | 6444 | 122 | 8430 | 117 |

in commercial fields following heat treatment. The recently released variety N. Co. 310 showed relatively slight benefit from heat treatment, but whether this is because it has not yet reached as high a level of infection as the older varieties or that it is relatively more tolerant of the disease is not certain. The difficulty of attempting comparative rating of varieties with respect to resistance to stunting disease based on limited tests is shown by the results with C. P. 44/101 in these experiments. Yields of this variety were not increased by heat treatment in one experiment (table 1) and only slightly in the other (table 2), which is contrary to the results of all other similar experiments in which it has been included, and to observations of the effects of the disease in commercial fields of this variety.

A more reliable indication of the effects of stunting disease on C. P.

44/101 is provided by the data in table 4 which compare yields of (A) cane that was originally selected as healthy or free of stunting disease virus in 1953, with (B) healthy cane inoculated with the stunting disease virus in 1953, with (C) selected as diseased in 1950, and with (D) diseased cane treated with hot water at 50°C. for 2 hours in 1953. Yields of cane per acre from the originally selected healthy cane (A) have continued higher than from the originally diseased (C), while the originally diseased cane that was heat treated in 1953 (D) maintained through 1955 and 1956 considerably higher yields than either the originally healthy (A) or diseased (C). This indicates that the superior yielding capacity of heat-treated cane can be maintained over a period of years, although it does not necessarily mean that retreatment will not be required from time to time. The fact that the heat-treated cane has yielded better than the originally selected healthy is probably because some of the cane selected as healthy was actually infected.

In the average of the 2 plant cane and 2 stubble crops, the heat-treated cane (D) averaged 28 percent more cane per acre than the untreated (C), which may be taken as a measure of the decline in yielding capacity of C. P. 44/101 resulting from infection with stunting disease.

Among unreleased varieties now at the test fields included in the experiments (data not included in the tables), C. P. 53/1 proved to be very susceptible to stunting disease, somewhat comparable to C. P. 43/47 in this respect. Yields of C. P. 53/18, which will be sent to the secondary increase stations in 1957, were reduced to about the same extent as those of C. P. 44/101 by the disease. C. P. 52/68, which is now at the secondary increase stations and is considered the most promising of the unreleased varieties, appears to be resistant to stunting disease. In 2 years' experiments it has shown no reduction in yield from inoculation with the virus. A further indication of resistance is that heat treatment of field-run cane did not increase yields, which is evidence that the variety is either resistant to infection or to the effect of the disease if infection occurs. Based on information available at present, it appears to be more resistant to stunting disease than any of the commercial varieties. However, whether it is sufficiently resistant that heat treatment would not be necessary to control the disease in commercial fields remains to be determined.

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# FERTILIZATION


(Continued from page 333)


has been one ton of cane for each increment of 6 pounds of nitrogen. Where phosphate and potash were needed for sugar cane, the addition of 40 pounds of $P_2O_5$ and 60 pounds of $K_2O$ per acre increased the yield of cane 5 tons per acre above the use of 60 to 100 pounds of nitrogen alone.


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# OUTFIELD SUGARCANE VARIETY TRIALS--1956

*By T. J. Stafford, Assistant Agronomist, Department of Outfield Sugars, Louisiana Agricultural Experiment Station*

*(Billeaud, Cinclare, Glenwood, Reserve, Shirley and Youngsville test fields)*

## Introduction

In order to compare certain agronomic characteristics of different varieties of sugar cane under the various environmental conditions in the Louisiana sugar belt, experiments are conducted annually at several locations. These experiments are located on lands of selected producers who cooperate in obtaining the information. Similar to other phases of the sugar cane variety program this work is conducted according to an agreement between the Louisiana Agricultural Experiment Station, the United States Department of Agriculture and the American Sugar Cane League. All major decisions pertaining to the variety program are made in committee meetings with representatives from each organization present.

For several years the U.S.D.A. Sugar Cane Field Station at Houma, Louisiana, and the Louisiana Agricultural Experiment Station at Baton Rouge, Louisiana, conducted variety trials independently and at different locations with a free exchange of information between the stations. After several committee meetings in 1955 it was decided that the stations would combine person-

**TABLE 1**

**Average yields [1] for sugar cane varieties at all locations [2] during the years 1951-1955.**

| Variety | Number of Tests | Tons of cane per acre | Pounds of sugar per ton of cane | Pounds of sugar per acre | | | |
|---|---|---|---|---|---|---|---|
| | | | | Plant cane | First stubble | Second stubble | All Tests |
| C. P. 48-103 | 33 | 99 | 121 | 123 | 120 | 117 | 120 |
| N. Co. 310 | 35 | 112 | 102 | 120 | 107 | 106 | 114 |
| C. P. 47-193 | 49 | 101 | 109 | 104 | 118 | 97 | 110 |
| C. P. 44-101 | 91 | 26.36 | 167.4 | 4311 | 4631 | 4357 | 4413 |
| C. P. 44-154 | 24 | 109 | 89 | 97 | 95 | 91 | 98 |
| C. P. 36-13 | 33 | 91 | 102 | 96 | 94 | 78 | 93 |
| C. P. 44-155 | 88 | 86 | 105 | 94 | 85 | 91 | 91 |
| C. P. 36-105 | 83 | 90 | 99 | 95 | 87 | 84 | 89 |
| C. P. 29-116 | 25 | 109 | 78 | 93 | 86 | 67 | 87 |
| C. P. 43-47 | 51 | 81 | 104 | 89 | 87 | 82 | 85 |
| C. P. 34-120 | 19 | 84 | 100 | 88 | 86 | 75 | 84 |
| Co. 290 | 25 | 104 | 80 | 96 | 79 | 58 | 84 |

[1] Average yields are expressed as a percentage of C. P. 44-101.
[2] Billeaud, Cinclare, Glenwood, Reserve, Shirley and Youngsville test fields.

**TABLE 2**
**Average yields [1] for sugar cane varieties in all tests [2] in 1956.**

| Variety | Number of Tests | Tons of cane per acre | Pounds of sugar per ton of cane | Pounds of sugar per acre | | | |
|---|---|---|---|---|---|---|---|
| | | | | Plant cane | First stubble | Second stubble | All tests |
| C. P. 44-101 | 18 | 29.42 | 192.2 | 5464 | 5931 | 5511 | 5656 |
| Co. 290 | 5 | 106 | 83 | 116 | 77 | 70 | 88 |
| C. P. 29-116 | 5 | 109 | 69 | 90 | 71 | 63 | 76 |
| C. P. 36-13 | 6 | 92 | 101 | 102 | 103 | 75 | 93 |
| C. P. 36-105 | 17 | 96 | 100 | 94 | 97 | 94 | 96 |
| C. P. 43-47 | 10 | 86 | 105 | 83 | 93 | 109 | 91 |
| C. P. 44-154 | 3 | 118 | 76 | ---- | 97 | 75 | 90 |
| C. P. 44-155 | 17 | 83 | 105 | 96 | 79 | 86 | 87 |
| C. P. 47-193 | 18 | 101 | 103 | 94 | 100 | 128 | 104 |
| C. P. 48-103 | 18 | 92 | 118 | 101 | 115 | 107 | 108 |
| N. Co. 310 | 18 | 119 | 100 | 114 | 112 | 138 | 118 |
| C. P. 48-117* | 6 | 103 | 90 | 93 | ---- | ---- | 93 |
| C. P. 50-40* | 7 | 99 | 104 | 103 | ---- | ---- | 103 |
| C. P. 51-21* | 5 | 79 | 116 | ---- | 92 | ---- | 92 |
| C. P. 51-24* | 4 | 105 | 110 | ---- | 115 | ---- | 115 |
| C. P. 52-16* | 5 | ---- | 94 | ---- | ---- | ---- | ---- |
| C. P. 52-38* | 5 | ---- | 109 | ---- | ---- | ---- | ---- |
| C. P. 52-57* | 6 | ---- | 86 | ---- | ---- | ---- | ---- |
| C. P. 52-67* | 5 | ---- | 87 | ---- | ---- | ---- | ---- |
| C. P. 52-68* | 6 | ---- | 107 | ---- | ---- | ---- | ---- |
| C. P. 52-71* | 6 | ---- | 75 | ---- | ---- | ---- | ---- |

* Unreleased varieties.
[1] Yields are expressed as a percentage of C. P. 44-101.
[2] Billeaud, Cinclare, Glenwood, Reserve, Shirley and Youngsville test fields.

nel and equipment to carry out the variety work at all outfield test locations as a team. Uniform techniques were to be used in all test fields. It was agreed that the Houma station small plot weighing device would be used at all test field locations and that all samples for juice analyses would be handled by the Houma laboratory.

Under this new plan the Houma station agreed to discontinue variety trials at Alma, Elm Hall and Albania Plantations and to initiate a

**TABLE 3**

**Average yields * for sugar cane varieties grown on Richland silt loam near Broussard, La., during the years 1951-1955. (Billeaud test field).**

| Variety | Number of Tests | Tons of cane per acre | Pounds of sugar per ton of cane | Pounds of sugar per acre | | | |
|---|---|---|---|---|---|---|---|
| | | | | Plant cane | First stubble | Second stubble | All tests |
| C. P. 48-103 | 3 | 96 | 122 | 125 | 110 | ---- | 118 |
| N. Co. 310 | 3 | 110 | 103 | 111 | 115 | ---- | 113 |
| C. P. 36-13 | 10 | 107 | 100 | 106 | 108 | ---- | 107 |
| C. P. 44-154 | 10 | 115 | 90 | 101 | 108 | ---- | 105 |
| C. P. 47-193 | 5 | 93 | 109 | 96 | 108 | ---- | 102 |
| C. P. 44-101 | 10 | 24.50 | 168.5 | 3787 | 4473 | ---- | 4130 |
| C. P. 29-116 | 10 | 116 | 82 | 96 | 99 | ---- | 98 |
| Co. 290 | 10 | 112 | 80 | 98 | 85 | ---- | 92 |
| C. P. 36-105 | 10 | 95 | 96 | 87 | 94 | ---- | 91 |
| C. P. 43-47 | 5 | 88 | 100 | 88 | 100 | ---- | 88 |
| C. P. 44-155 | 9 | 85 | 101 | 85 | 86 | ---- | 86 |

* Yields are expressed as a percentage of C. P. 44-101.

variety test field on the Iberia soil type. The Baton Rouge station agreed to discontinue the Caffery test field. After these decisions were put into practice, each station was responsible for planning the experiments and collecting the data at 6 test field locations. The data from all 12 locations are to be combined into a single report each year and variety recommendations by areas, based on the results obtained, are to be issued annually. The results reported hereafter were obtained from the 6 test fields under the supervision of the Louisiana Agricultural Experiment Station.

## Procedure

Each year a committee selects the most promising experimental varieties at the Houma and Baton Rouge stations. Seed cane of these selected varieties is introduced to each test field on a small plot increase basis for the first year. (All test field introductions beginning with the fall planting of 1955 are heat treated for control of the stunting disease). By the following year enough seed is usually available for planting the new varieties along with commercial varieties in comparative tests. Beginning with the fall planting of 1955 (1956 plant cane) all experiments are planted in small plots with the varieties arranged in a randomized complete block design with 4 replications. Prior to 1955 (1956 first and second stubble) each variety was planted in a large single plot. Normal plantation methods are followed in the culture of the cane.

During harvest season all the cane from each plot is cut and then weighed with the Houma small plot weighing device. For stubble test weights in 1956, however, a section of cane approximately 1/50 acre in area was cut and weighed in each variety, since these tests had been planted in large non replicated plots. Where practical the cane is burned before weighing. If burning is not

practical the cane is weighed and deductions are made for trash. Twenty stalks are taken from each plot at random and sent to the Houma laboratory for juice analysis. These data serve as a basis for estimates of tons of cane per acre and pounds of sugar per ton of cane.

**TABLE 4**

**Yields for sugar cane varieties grown on Richland silt loam near Broussard, La. in 1956. (Billeaud test field)**

| Variety | Age | Tons of cane per acre | Pounds of sugar per ton of cane | Sugar per acre | |
|---|---|---|---|---|---|
| | | | | Pounds | (per cent of 44-101) |
| Co. 290 | Plant cane | 32.24 | 181.9 | 5864 | 130 |
| | First stubble | 34.33 | 163.3 | 5606 | 79 |
| | Average | 33.28 | 172.6 | 5744 | 99 |
| C. P. 29-116 | Plant cane | 26.50 | 164.4 | 4356 | 96 |
| | First stubble | 3786 | 137.6 | 5210 | 74 |
| | Average | 32.18 | 151.0 | 4859 | 84 |
| C. P. 36-13 | Plant cane | 23.76 | 206.1 | 4898 | 108 |
| | First stubble | 35.24 | 206.5 | 7277 | 103 |
| | Average | 29.50 | 206.3 | 6086 | 105 |
| C. P. 36-105 | Plant cane | 21.12 | 201.1 | 4248 | 94 |
| | First stubble | 35.03 | 166.1 | 5818 | 82 |
| | Average | 28.07 | 183.6 | 5154 | 89 |
| C. P. 44-101 | Plant cane | 21.85 | 207.0 | 4524 | |
| | First stubble | 34.30 | 206.4 | 7080 | |
| | Average | 28.07 | 206.7 | 5802 | |
| C. P. 44-154 | First stubble | 42.53 | 169.1 | 7192 | 102 |
| C. P. 44-155 | Plant cane | 20.26 | 207.0 | 4193 | 93 |
| | First stubble | 28.95 | 167.9 | 4861 | 69 |
| | Average | 24.60 | 187.3 | 4610 | 79 |
| C. P. 47-193 | Plant cane | 20.72 | 211.1 | 4373 | 97 |
| | First stubble | 34.84 | 182.8 | 6396 | 90 |
| | Average | 27.78 | 196.9 | 5470 | 94 |
| C. P. 48-103 | Plant cane | 17.96 | 231.0 | 4148 | 92 |
| | First stubble | 35.21 | 250.8 | 8831 | 125 |
| | Average | 26.58 | 240.9 | 6403 | 110 |
| C. P. 50-40* | Plant cane | 24.18 | 211.7 | 5119 | 113 |
| C. P. 51-21* | First stubble | 27.83 | 231.5 | 6443 | 91 |
| C. P. 51-24* | First stubble | 40.40 | 206.7 | 8351 | 118 |
| N. Co. 310 | Plant cane | 23.12 | 230.7 | 5333 | 118 |
| | First stubble | 34.04 | 165.0 | 5617 | 79 |
| | Average | 28.58 | 197.8 | 5653 | 97 |
| L.S.D. @ P.05 | Plant cane | 3.86 | 14.8 | 753 | 17 |

* Unreleased varieties.

Miscellaneous information pertaining to the Billeaud test field for 1956.

1. Experiments conducted by the L. S. U. Agricultural Experiment Station in cooperation with the U. S. D. A. Sugar Cane Field Station, Houma, La., Billeaud-Reaux Plantation and S. J. Bowles, County Agent, Lafayette Parish.
2. **Planting dates:** Plant cane—9/28/55.
   First stubble—9/16/54.
   Plant cane followed soybeans turned under.
3. **Fertilizers:** Plant cane—60 lbs. nitrogen per acre, stubble—80 lbs. nitrogen per acre.
4. **Weed control methods:** Hand hoe, cultivation.
5. **Insect control methods:** Artificial release of Trichogramma parasites.
6. **Stands:** Good.
7. **Insect infestations:** Borer infestations light to moderate.
8. **Weed infestations:** Heavy in plant cane, moderate in stubble, mostly annuals.
9. **Varieties lodged at time of harvest:** C. P. 29-116.
10. **Harvest methods and dates:** Cut by hand and weighed using small plot weighing device.
    Plant cane—11/28/56.
    First stubble—12/2/55, 10/31/56.
11. **Juice analyses:** By Houma laboratory from 20 stalks taken at random from each plot.
12. **Rainfall (inches) 1956:**

| | | | | | |
|---|---|---|---|---|---|
| January | 2.53 | May | 3.00 | September | 3.03 |
| February | 8.37 | June | 7.86 | October | 2.37 |
| March | 4.29 | July | 3.42 | November | 7.36 |
| April | 1.98 | August | 6.47 | December | 9.42 |
| | | | | Total | 60.10 |

## TABLE 5

**Average yields * for sugar cane varieties grown on Richland silt loam near Youngsville, La., during the years 1951-1955. (Youngsville test field)**

| Variety | No. of tests | Tons of cane/ acre | Pounds of sugar/ton of cane | Pounds of sugar per acre | | | |
|---|---|---|---|---|---|---|---|
| | | | | Plant cane | First stubble | Second stubble | All tests |
| C. P. 48-103 | 5 | 94 | 121 | 112 | 135 | 99 | 115 |
| N. Co. 310 | 5 | 101 | 109 | 113 | 113 | 104 | 110 |
| C. P. 47-193 | 5 | 93 | 112 | 100 | 144 | 70 | 105 |
| C. P. 44-101 | 15 | 29.00 | 182.1 | 4567 | 6006 | 5290 | 5288 |
| C. P. 44-154 | 14 | 101 | 88 | 93 | 82 | 91 | 89 |
| C. P. 44-155 | 15 | 78 | 106 | 87 | 83 | 81 | 84 |
| C. P. 36-13 | 12 | 79 | 102 | 91 | 84 | 67 | 81 |
| C. P. 29-116 | 15 | 102 | 74 | 90 | 72 | 67 | 76 |
| Co. 290 | 15 | 96 | 79 | 94 | 73 | 58 | 75 |
| C. P. 36-105 | 7 | 66 | 100 | 82 | 59 | 57 | 66 |
| C. P. 43-47 | 8 | 63 | 103 | 75 | 66 | 58 | 66 |

* Yields are expressed as a percentage of C. P. 44-101.

## TABLE 6

**Yields for sugar cane varieties grown on Richland silt loam near Youngsville, La., in 1956. (Youngsville test field)**

| Variety | Age | Tons of cane per acre | Pounds of sugar per ton of cane | Sugar per acre | |
|---|---|---|---|---|---|
| | | | | Pounds | (per cent of 44-101) |
| Co. 290 | Plant cane | 26.68 | 182.7 | 4874 | 102 |
| | First stubble | 38.42 | 134.7 | 5175 | 76 |
| | Second stubble | 32.94 | 127.7 | 4206 | 71 |
| | Average | 32.68 | 148.3 | 4846 | 81 |
| C. P. 29-116 | Plant cane | 27.05 | 148.1 | 4007 | 84 |
| | First stubble | 35.87 | 131.5 | 4717 | 69 |
| | Second stubble | 42.63 | 88.8 | 3786 | 64 |
| | Average | 35.18 | 122.8 | 4320 | 72 |
| C. P. 36-13 | Plant cane | 18.19 | 220.7 | 4015 | 84 |
| | Second stubble | 18.35 | 139.5 | 2560 | 37 |
| C. P. 36-105 | Plant cane | 17.74 | 206.3 | 3659 | 77 |
| | First stubble | 34.69 | 172.1 | 5970 | 87 |
| C. P. 43-47 | Plant cane | 12.40 | 228.2 | 2830 | 59 |
| C. P. 44-154 | First stubble | 48.09 | 131.2 | 6309 | 92 |
| | Second stubble | 39.85 | 125.5 | 4502 | 66 |
| C. P. 44-101 | Plant cane | 23.09 | 206.1 | 4759 | |
| | First stubble | 41.93 | 163.0 | 6835 | |
| | Second stubble | 36.83 | 160.3 | 5909 | |
| | Average | 33.96 | 176.4 | 5991 | |
| C. P. 44-155 | Plant cane | 17.49 | 212.9 | 3724 | 78 |
| | First stubble | 19.02 | 163.4 | 3108 | 45 |
| | Second stubble | 28.20 | 209.1 | 5897 | 100 |
| | Average | 21.57 | 195.1 | 4208 | 70 |
| C. P. 47-193 | Plant cane | 14.64 | 209.9 | 3973 | 65 |
| | First stubble | 29.52 | 192.2 | 5674 | 83 |
| | Second stubble | 42.24 | 191.5 | 8089 | 137 |
| | Average | 28.80 | 197.8 | 5697 | 95 |
| C. P. 48-103 | Plant cane | 13.50 | 235.1 | 3174 | 67 |
| | First stubble | 24.97 | 220.9 | 5516 | 81 |
| | Second stubble | 38.30 | 191.3 | 7327 | 124 |
| | Average | 25.59 | 215.7 | 5520 | 92 |
| C. P. 48-117* | Plant cane | 13.99 | 208.4 | 2910 | 61 |
| C. P. ~~50-50~~ 50-40* | Plant cane | 19.06 | 235.2 | 4483 | 94 |
| C. P. 51-21* | First stubble | 34.78 | 198.3 | 6897 | 101 |
| C. P. 51-24* | First stubble | 32.71 | 229.4 | 7504 | 110 |
| N. Co. 310 | Plant cane | 17.91 | 227.4 | 4073 | 86 |
| | First stubble | 37.22 | 190.3 | 7083 | 104 |
| | Second stubble | 40.85 | 181.8 | 7426 | 126 |
| | Average | 31.99 | 199.8 | 6392 | 107 |
| L.S.D. | Plant cane | 4.35 | 16.4 | 883 | 19 |

* Unreleased varieties.

Miscellaneous information pertaining to the Youngsville test field for 1956.

1. Experiments conducted by the L. S. U. Agricultural Experiment Station in cooperation with the U. S. D. A. Sugar Cane Field Station, Houma, La., Young's Industries, Inc., and S. J. Bowles, County Agent, Lafayette Parish.
2. **Planting dates:** Plant Cane—9/27/55.
   First stubble—9/21/54.
   Second stubble—9/23/53.
   Plant cane followed soybeans turned under.
3. **Fertilizers:** Plant cane—80 lbs. nitrogen per acre, stubble—160 lbs. nitrogen per acre in 2 applications.
4. **Weed control methods:** Hand hoe, cultivation.
5. **Insect control methods:** Artificial release of Trichogramma parasites.
6. **Stands:** Fair in plant cane, good in stubble.
7. **Insect infestations:** Moderate borer infestations.
8. **Weed infestations:** Heavy in plant cane, moderate in stubble, mostly annuals.
9. **Varieties lodged at time of harvest:** N. Co. 310, C. P. 29-116, C. P. 44-154, C. P. 44-155, Co. 290, C. P. 51-21 in stubble. No lodging occurred in plant cane.
10. **Harvest methods and dates:** Cut by hand, stubble hand stripped, plant cane burned, weighed with small plot weighing device.
    Plant cane—11/26/56.
    First stubble—12/1/55, 10/30/56.
    Second stubble—11/30/55, 12/1/54, 10/29/56.
11. **Juice analyses:** By Houma laboratory from 20 stalks taken at random from each plot.
12. C. P. 36-13 second stubble severely damaged by borers and top rot (?).
13. **Rainfall (inches) 1955:**

| | | | | | |
|---|---|---|---|---|---|
| January | 2.30 | May | 3.52 | September | 3.11 |
| February | 9.16 | June | 6.55 | October | 1.55 |
| March | 3.53 | July | 5.08 | November | 5.60 |
| April | 1.79 | August | 6.13 | December | 7.98 |
| | | | | Total | 56.30 |

**TABLE 7**

**Average yields * for sugar cane varieties grown on Mhoon very fine sandy loam near Reserve, La., during the years 1951-1955. (Reserve test field)**

| Variety | No. of tests | Tons of cane/ acre | Pounds of sugar/ton of cane | Pounds of sugar per acre | | | |
|---|---|---|---|---|---|---|---|
| | | | | Plant cane | First stubble | Second stubble | All tests |
| N. Co. 310 | 7 | 106 | 96 | 120 | 78 | 107 | 102 |
| C. P. 44-101 | 15 | 30.43 | 164.8 | 5091 | 4965 | 4981 | 5012 |
| C. P. 48-103 | 7 | 90 | 108 | 99 | 95 | 101 | 98 |
| C. P. 47-193 | 12 | 89 | 103 | 89 | 101 | 86 | 92 |
| C. P. 36-105 | 15 | 89 | 102 | 101 | 91 | 80 | 91 |
| C. P. 36-13 | 11 | 87 | 103 | 91 | 90 | 88 | 90 |
| C. P. 43-47 | 15 | 86 | 104 | 88 | 91 | 92 | 90 |
| C. P. 34-120 | 11 | 87 | 102 | 93 | 99 | 75 | 89 |
| C. P. 44-155 | 15 | 83 | 105 | 89 | 95 | 80 | 88 |

* Yields are expressed as a percentage of C. P. 44-101.

## TABLE 8

**Yields for sugar cane varieties grown on Mhoon very fine sandy loam near Reserve, La., in 1956. (Reserve test field)**

| Variety | Age | Tons of cane per acre | Pounds of sugar per ton of cane | Sugar per acre | |
|---|---|---|---|---|---|
| | | | | Pounds | (per cent of 44-101) |
| C. P. 36-13 | Plant cane | 35.01 | 206.6 | 7234 | 111 |
| | Second stubble | 26.03 | 241.1 | 6276 | 92 |
| C. P. 36-105 | Plant cane | 32.39 | 195.6 | 6337 | 98 |
| | First stubble | 28.75 | 214.3 | 6161 | 90 |
| | Second stubble | 23.60 | 220.5 | 5204 | 90 |
| | Average | 28.25 | 210.1 | 5935 | 93 |
| C. P. 43-47 | Plant cane | 30.20 | 206.6 | 6240 | 96 |
| | First stubble | 28.55 | 229.5 | 6552 | 96 |
| | Second stubble | 29.22 | 242.7 | 7092 | 123 |
| | Average | 29.32 | 226.2 | 6632 | 104 |
| C. P. 44-101 | Plant cane | 31.59 | 205.6 | 6494 | |
| | First stubble | 29.40 | 233.2 | 6856 | |
| | Second stubble | 24.92 | 231.2 | 5762 | |
| | Average | 28.63 | 223.3 | 6393 | |
| C. P. 44-155 | Plant cane | 29.00 | 211.6 | 6135 | 94 |
| | First stubble | 23.69 | 261.9 | 6204 | 90 |
| | Second stubble | 24.47 | 241.4 | 5907 | 103 |
| | Average | 25.72 | 238.3 | 6127 | 96 |
| C. P. 47-193 | Plant cane | 29.13 | 201.5 | 5871 | 90 |
| | First stubble | 24.27 | 226.9 | 5507 | 80 |
| | Second stubble | 27.12 | 237.9 | 6452 | 112 |
| | Average | 26.84 | 222.1 | 5962 | 93 |
| C. P. 48-103 | Plant cane | 29.55 | 227.4 | 6721 | 103 |
| | First stubble | 24.83 | 265.8 | 6660 | 97 |
| | Second stubble | 22.37 | 254.2 | 5686 | 99 |
| | Average | 25.58 | 249.1 | 6372 | 100 |
| C. P. 48-117* | Plant cane | 33.36 | 193.8 | 6466 | 100 |
| C. P. 50-40* | Plant cane | 37.05 | 207.9 | 7704 | 119 |
| C. P. 51-21* | First stubble | 22.85 | 254.6 | 5818 | 85 |
| C. P. 51-24* | First stubble | 31.47 | 238.1 | 7493 | 109 |
| N. Co. 310 | Plant cane | 36.25 | 215.4 | 7809 | 120 |
| | First stubble | 37.22 | 236.9 | 8817 | 129 |
| | Second stubble | 24.87 | 223.4 | 5556 | 96 |
| | Average | 32.78 | 225.2 | 7382 | 115 |
| L.S.D. @ P.05 | Plant cane | 4.51 | 13.7 | 903 | 14 |

* Unreleased varieties.

Miscellaneous information pertaining to the Reserve test field for 1956.

1. Experiments conducted by the L. S. U. Agricultural Experiment Station in cooperation with the U. S. D. A. Sugar Cane Field Station, Houma, La., Gulf States Land and Industries Co., and V. O. Calandro, County Agent, St. John Parish.
2. **Planting dates:** Plant cane—9/24/55.
   First stubble—9/30/54.
   Second stubble—9/15/53.
   Plant cane followed summer fallow.
3. **Fertilizers and interplanted green manure crops:** Plant cane—25 lbs. nitrogen per acre, **Melilotus indica** turned under, stubble—40 lbs. nitrogen per acre.
4. **Weed control methods:** T C A, 24 D, cultivation.
5. **Insect control methods:** 4 dustings with Ryania.
6. **Stands:** Good in stubble, fair in plant cane.
7. **Insect infestations:** Moderate borer infestation.
8. **Weed infestations:** Moderate.
9. **Varieties lodged at time of harvest:** All varieties lodged to some extent in stubble. N. Co. 310 was lodged most severely, C. P. 43-47 was most erect.
10. **Harvest methods and dates:** Stubble was cut by machine, plant cane by hand. All plots were burned and weighed with small plot weighing device.
    Plant cane—12/11/56.
    First stubble—12/23/55, 12/11/56.
    Second stubble—10/31/55, 12/6/54, 12/11/56.
11. **Juice analyses:** By Houma laboratory from 20 stalks taken at random from each plot.
12. **Rainfall (inches) 1955:**

| | | | | | |
|---|---|---|---|---|---|
| January | 2.58 | May | 5.94 | Septmeber | 5.54 |
| February | 12.47 | June | 8.78 | October | 3.22 |
| March | 4.92 | July | 7.23 | November | 1.94 |
| April | 3.60 | August | 2.32 | December | 8.17 |
| | | | | Total | 66.71 |

**TABLE 9**

**Average yields * for sugar cane varieties grown on Mhoon very fine sandy loam near Napoleonville, La., during the years 1951-1955. (Glenwood test field)**

| Variety | No. of Tests | Tons of cane/ acre | Pounds of sugar/ton of cane | Pounds of sugar per acre | | | |
|---|---|---|---|---|---|---|---|
| | | | | Plant cane | First stubble | Second stubble | All tests |
| C. P. 48-103 | 7 | 97 | 118 | 104 | 118 | 122 | 115 |
| N. Co. 310 | 7 | 109 | 104 | 113 | 107 | 120 | 113 |
| C. P. 47-193 | 11 | 97 | 105 | 92 | 100 | 113 | 102 |
| C. P. 44-101 | 15 | 26.00 | 166.5 | 5143 | 4205 | 3675 | 4341 |
| C. P. 36-105 | 15 | 97 | 101 | 98 | 106 | 91 | 98 |
| C. P. 44-155 | 15 | 93 | 101 | 86 | 93 | 103 | 94 |
| C. P. 43-47 | 12 | 89 | 102 | 93 | 91 | 88 | 91 |

* Yields are expressed as a percentage of C. P. 44-101.

## Some Seasonal Conditional for 1956

The Louisiana sugar belt experienced a rather mild winter in 1955-1956 and a relatively early spring in 1956. The cane began growing early in the season with good stands appearing. In some areas spring rains hampered cultivation to the extent that effective weed control was not obtained. Rainfall during the growing season varied consider-

ably from place to place with some areas receiving sufficient moisture for good crop growth while in other areas growth was apparently suppressed by the lack of moisture. Strong winds and heavy rains in September caused considerable lodging in the Southern portion of the sugar belt. A relatively dry fall resulted in early maturity of the cane and good harvest conditions prevailed throughout most of the harvest season.

**TABLE 10**

**Yields for sugar cane varieties grown on Mhoon very fine sandy loam near Napoleonville, La., in 1956. (Glenwood test field)**

| Variety | Age | Tons of cane per acre | Pounds of sugar per ton of cane | Sugar per acre | |
|---|---|---|---|---|---|
| | | | | Pounds | (per cent of 44-101) |
| C. P. 36-105 | Plant cane | 35.84 | 178.4 | 6395 | 93 |
| | First stubble | 28.26 | 186.7 | 5276 | 95 |
| | Second stubble | 27.50 | 168.1 | 4623 | 98 |
| | Average | 30.53 | 177.7 | 5425 | 95 |
| C. P. 43-47 | Plant cane | 33.88 | 209.2 | 7087 | 103 |
| | First stubble | 29.81 | 179.6 | 5354 | 96 |
| | Second stubble | 24.89 | 172.3 | 4289 | 91 |
| | Average | 29.52 | 187.0 | 5520 | 97 |
| C. P. 44-101 | Plant cane | 35.73 | 192.0 | 6859 | |
| | First stubble | 30.34 | 183.1 | 5555 | |
| | Second stubble | 25.34 | 185.8 | 4708 | |
| | Average | 30.47 | 186.9 | 5695 | |
| C. P. 44-155 | Plant cane | 33.65 | 197.4 | 6643 | 97 |
| | First stubble | 25.73 | 180.2 | 4637 | 83 |
| | Second stubble | 19.61 | 205.2 | 4024 | 85 |
| | Average | 26.33 | 194.2 | 5113 | 90 |
| C. P. 47-193 | Plant cane | 38.64 | 183.7 | 7098 | 103 |
| | First stubble | 31.06 | 202.1 | 6277 | 113 |
| | Second stubble | 27.68 | 181.4 | 5021 | 107 |
| | Average | 32.46 | 189.0 | 6135 | 108 |
| C. P. 48-103 | Plant cane | 33.53 | 196.6 | 6592 | 96 |
| | First stubble | 28.99 | 219.9 | 6375 | 115 |
| | Second stubble | 25.48 | 205.2 | 5228 | 111 |
| | Average | 29.33 | 207.2 | 6077 | 107 |
| C. P. 48-117* | Plant cane | 43.73 | 152.6 | 6674 | 97 |
| C. P. 50-40* | Plant cane | 36.85 | 194.5 | 7168 | 105 |
| C. P. 51-21* | First stubble | 22.81 | 220.9 | 5039 | 91 |
| C. P. 51-24* | First stubble | 37.65 | 184.6 | 6950 | 125 |
| N. Co. 310 | Plant cane | 42.81 | 173.8 | 7440 | 108 |
| | First stubble | 28.68 | 165.5 | 4747 | 85 |
| | Second stubble | 33.76 | 152.8 | 5159 | 110 |
| | Average | 35.08 | 164.0 | 5753 | 101 |
| L.S.D. @ P.05 | Plant cane | 3.38 | 21.4 | NSD | |

* Unreleased varieties.

Miscellaneous information pertaining to the Glenwood test field for 1956.

1. Experiments conducted by the L. S. U. Agricultural Experiment Station in cooperation with the U. S. D. A. Sugar Cane Field Station, Houma., La., Glenwood Plantation and E. J. Lousteau, County Agent, Assumption Parish.
2. **Planting dates:** Plant cane—9/14/55.
   First stubble—9/23/54.
   Second stubble—9/16/53.
   Plant cane followed summer fallow.
3. **Fertilizers and interplanted green manure crops:** Plant cane—60 lbs. nitrogen per acre, **Melilotus indica** turned under, stubble 80 lbs. nitrogen per acre.
4. **Weed control methods:** T C A, 24 D, cultivation.
5. **Insect control methods:** Artificial release of Trichogramma parasites and 2 dustings with Ryania.
6. **Stands:** Good.
7. **Insect infestations:** Light to moderate.
8. **Weed infestations:** Light.
9. **Varieties lodged at time of harevst:** All varieties were lodged to some extent. N. Co. 310 was lodged most severely. C. P. 43-47 was most erect.
10. **Harvest methods and dates:** Plant cane and second stubble were cut by hand; first stubble was cut by machine. All tests were weighed with small plot weighing device.
    Plant cane—11/19/56.
    First stubble—11/25/55, 10/22/56.
    Second stubble—11/4/55, 12/4/54, 10/22/56.
11. **Juice analyses:** By Houma laboratory from 20 stalks taken at random from each plot.
12. **Rainfall (inches) 1956:**

| | | | | | |
|---|---|---|---|---|---|
| January | 3.82 | May | 9.50 | September | 8.45 |
| February | 7.10 | June | 6.40 | October | 1.60 |
| March | 3.85 | July | 8.61 | November | 2.40 |
| April | 4.18 | August | 7.30 | December | 8.55 |
| | | | | Total | 71.76 |

**TABLE 11**

**Average yields * for sugar cane varieties grown on Mhoon very fine sandy loam near Brusly, La., during the years 1951-1955. (Cinclare light soil test field)**

| Variety | No. of tests | Tons of cane per acre | Pounds of sugar per ton of cane | Pounds of sugar per acre | | | |
|---|---|---|---|---|---|---|---|
| | | | | Plant cane | First stubble | Second stubble | All tests |
| C. P. 48-103 | 6 | 91 | 125 | 117 | 118 | 112 | 116 |
| C. P. 47-193 | 6 | 96 | 113 | 95 | 115 | 118 | 109 |
| C. P. 44-101 | 14 | 34.27 | 157.7 | 5430 | 5240 | 5537 | 5402 |
| C. P. 36-105 | 14 | 88 | 108 | 104 | 92 | 93 | 96 |
| N. Co. 310 | 6 | 92 | 100 | 109 | 75 | 94 | 93 |
| C. P. 43-47 | 11 | 81 | 111 | 101 | 86 | 88 | 92 |
| C. P. 44-155 | 14 | 80 | 110 | 99 | 84 | 86 | 90 |

* Yields are expressed as a percentage of C. P. 44-101.

## Results and Discussion

The 1956 results as an average of all test fields are summarized in Table 2. Results for 1956 by test fields may be found in the even numbered tables. Yield estimates for each variety in plant cane for 1956 are the averages for 4 plots approximately 1/100 acre in area. All other estimates are based on a

single determination.

Results for one year alone are inconclusive but when averages obtained over a period of years are considered in conjunction with the 1956 results fairly reliable comparisons may be made. For this reason the averages for all tests during the years 1951-1955 and for each individual test field are also presented. This information may be found in the odd numbered tables.

Data from the Baton Rouge station outfield tests for the C. P. varieties 48-117, 50-40, 51-21, 51-24, 52-16, 52-37, 52-38, 52-57, 52-67, 52-68 and 52-71 are preliminary. Therefore a detailed discussion of these varieties is withheld until further tests have been conducted. The C. P. varieties 50-40, 52-38 and 52-71 were elimianted by committee

**TABLE 12**

**Yields for sugar cane varieties grown on Mhoon very fine sandy loam near Brusly, La., in 1956. (Cinclare light soil test field)**

| Variety | Age | Tons of cane per acre | Pounds of sugar per ton of cane | Sugar per acre | |
|---|---|---|---|---|---|
| | | | | Pounds | (per cent of 44-101) |
| C. P. 36-105 | Plant cane | 42.60 | 174.5 | 7432 | 99 |
| | First stubble | 34.47 | 201.6 | 6949 | 90 |
| | Second stubble | 22.07 | 208.4 | 4599 | 82 |
| | Average | 33.05 | 194.8 | 6438 | 93 |
| C. P. 43-47 | Plant cane | 33.17 | 205.3 | 6810 | 90 |
| | First stubble | 32.80 | 209.2 | 6862 | 88 |
| C. P. 44-101 | Plant cane | 41.89 | 179.7 | 7528 | |
| | First stubble | 38.87 | 199.5 | 7755 | |
| | Second stubble | 29.62 | 188.5 | 5583 | |
| | Average | 36.79 | 189.2 | 6861 | |
| C. P. 44-155 | Plant cane | 36.09 | 203.2 | 7335 | 97 |
| | First stubble | 30.33 | 193.1 | 5857 | 76 |
| C. P. 47-193 | Plant cane | 35.88 | 180.1 | 6462 | 86 |
| | First stubble | 37.26 | 214.3 | 7985 | 103 |
| | Second stubble | 22.86 | 207.7 | 4748 | 85 |
| | Average | 32.00 | 200.7 | 6422 | 94 |
| C. P. 48-103 | Plant cane | 34.47 | 230.9 | 7958 | 106 |
| | First stubble | 38.89 | 249.3 | 9695 | 125 |
| | Second stubble | 21.25 | 256.2 | 5444 | 98 |
| | Average | 31.53 | 245.4 | 7737 | 113 |
| C. P. 48-117* | Plant cane | 44.46 | 157.7 | 7011 | 93 |
| C. P. 50-40* | Plant cane | 41.39 | 192.6 | 7973 | 94 |
| C. P. 51-21* | First stubble | 30.12 | 238.2 | 7175 | 93 |
| C. P. 51-24* | First stubble | ----- | 232.5 | ---- | |
| N. Co. 310 | Plant cane | 41.28 | 187.9 | 7757 | 103 |
| | First stubble | 38.23 | 204.8 | 7830 | 101 |
| | Second stubble | 31.56 | 197.7 | 6239 | 112 |
| | Average | 37.02 | 196.8 | 7286 | 106 |
| L.S.D. @ P.5 | Plant cane | 3.60 | 14.4 | 927 | 14 |

* Unreleased varieties.

## TABLE 13

**Average yields * for sugar cane varieties grown on Sharkey clay near Brusly, La., during the years 1951-1955. (Cinclare heavy soil test field)**

| Variety | No. of tests | Tons of cane/ acre | Pounds of sugar/ton of cane | Pounds of sugar per acre | | | |
|---|---|---|---|---|---|---|---|
| | | | | Plant cane | First stubble | Second stubble | All tests |
| C. P. 48-103 | 1 | 131 | 132 | 163 | --- | --- | 163 |
| C. P. 47-193 | 7 | 113 | 107 | 134 | 105 | --- | 120 |
| N. Co. 310 | 3 | 116 | 104 | 136 | 103 | --- | 120 |
| C. P. 44-155 | 8 | 91 | 110 | 115 | 86 | --- | 101 |
| C. P. 44-101 | 10 | 24.33 | 161.1 | 3592 | 4260 | --- | 3920 |
| C. P. 36-105 | 10 | 84 | 98 | 89 | 75 | --- | 82 |
| C. P. 34-120 | 8 | 82 | 97 | 83 | 73 | --- | 79 |

* Yields are expressed as a percentage of C. P. 44-101.

## TABLE 14

**Yields for sugar cane varieties grown on Sharkey clay near Brusly La. in 1956. (Cinclare heavy soil test field)**

| Variety | Age | Tons of cane per acre | Pounds of sugar per ton of cane | Sugar per acre | |
|---|---|---|---|---|---|
| | | | | Pounds | (per cent of 44-101 |
| C. P. 36-105 | Plant cane | 26.33 | 165.7 | 4362 | 86 |
| | First stubble | 25.57 | 197.7 | 5055 | 96 |
| | Average | 25.95 | 181.7 | 4715 | 89 |
| C. P. 43-47 | Plant cane | 15.78 | 165.5 | 2612 | 51 |
| C. P. 44-101 | Plant cane | 33.34 | 152.8 | 5095 | |
| | First stubble | 25.37 | 207.2 | 5257 | |
| | Average | 29.35 | 180.0 | 5283 | |
| C. P. 44-155 | Plant cane | 25.33 | 194.8 | 4935 | 97 |
| | First stubble | 18.74 | 200.4 | 3755 | 71 |
| | Average | 22.03 | 197.6 | 4353 | 82 |
| C. P. 47-193 | Plant cane | 32.06 | 165.4 | 5302 | 104 |
| | First stubble | 26.45 | 203.6 | 5385 | 102 |
| | Average | 29.25 | 184.5 | 5397 | 103 |
| C. P. 48-103 | Plant cane | 28.46 | 184.8 | 5259 | 103 |
| | First stubble | 24.55 | 235.7 | 5786 | 110 |
| | Average | 26.50 | 210.2 | 5570 | 105 |
| C. P. 48-117* | Plant cane | 33.97 | 138.7 | 4711 | 92 |
| C. P. 50-40* | Plant cane | 26.76 | 150.5 | 4028 | 79 |
| N. Co. 310 | Plant cane | 38.52 | 156.0 | 6008 | 118 |
| | First stubble | 32.40 | 189.0 | 6124 | 116 |
| | Average | 35.46 | 172.5 | 6117 | 116 |
| L.S.D. @ P.05 | Plant cane | 3.85 | 13.6 | 815 | 16 |

* Unreleased varieties.

Miscellaneous information pertaining to the Cinclare test fields for 1956.

1. Experiments conducted by the L. S. U. Agricultural Experiment Station in cooperation with the U. S. D. A. Sugar Cane Field Station, Houma, La., Addition Plantation and H. A. Webb, County Agent, West Baton Rouge Parish.
2. **Planting dates:** Plant cane—9/23/55.
   First stubble—9/28/54.
   Second stubble—9/14/53.
   Plant cane followed summer fallow.
3. **Fertilizers and interplanted green manure crops:** Plant cane—45 lbs. nitrogen per acre, Austrian winter peas turned under, stubble—75 lbs. nitrogen per acre.
4. **Weed control methods:** T C A, 24 D, cultivation.
5. **Insect control methods:** Artificial release of Trichogramma parasites and 3 dustings with Ryania.
6. **Stands:** Good in all tests.
7. **Insect infestations:** Moderate borer infestations.
8. **Weed infestations:** Heavy Johnson Grass infestation in light soil second stubble, light to moderate in other tests.
9. **Varieties lodged at time of harvest:** None.
10. **Harvest methods and dates:** Plant cane cut by hand, stubble cut with machine, all tests weighed with small plot weighing device.
    Plant cane—12/4/56.
    First stubble—12/15/55, 10/24/56.
    Second stubble—10/28/55, 12/9/54, 10/24/56.
11. **Juice analyses:** By Houma laboratory from 20 stalks taken at random from each plot.
12. **Rainfall (inches) 1956:**

| | | | | | |
|---|---|---|---|---|---|
| January | 2.08 | May | 3.45 | September | 2.19 |
| February | 8.91 | June | 3.17 | October | 1.36 |
| March | 3.14 | July | 2.42 | November | 2.16 |
| April | 2.80 | August | 2.61 | December | 5.90 |
| | | | | Total | 40.19 |

13. **Freezing temperatures winter 1956:** Nov. 10—28°, 23—26°, 25—31°, 27—24°, 28—28°, 30—23°. Dec. 1—28°, 2—29°, 10—30°, 25—31°.
14. Some freeze damage in heavy soil plant cane was apparent.

**TABLE 15**

**Average yields * for sugar cane varieties grown on Yahola very fine sandy loam near Bunkie, La., during the years 1951-1955. (Shirley test field)**

| Variety | No. of tests | Tons of cane/ acre | Pounds of sugar/ton of cane | Pounds of sugar per acre | | | |
|---|---|---|---|---|---|---|---|
| | | | | Plant cane | First stubble | Second stubble | All tests |
| N. Co. 310 | 4 | 150 | 98 | 136 | 160 | --- | 148 |
| C. P. 48-103 | 6 | 128 | 118 | 142 | 145 | 152 | 146 |
| C. P. 47-193 | 3 | 128 | 111 | 123 | 155 | --- | 139 |
| C. P. 44-101 | 12 | 15.99 | 171.5 | 2571 | 3272 | 2305 | 2742 |
| C. P. 36-105 | 12 | 109 | 88 | 104 | 89 | 99 | 97 |
| C. P. 44-155 | 12 | 90 | 102 | 98 | 70 | 107 | 92 |

* Yields are expressed as a percentage of C. P. 44-101.

action in 1956.

Other varieties have been sufficiently tested to make fairly reliable comparisons. The following is a brief discussion of the more thoroughly tested varieties.

*C. P. 48-103:* As an average for all tests, yields of sugar per acre

(Tables 1 & 2). One exception has have been superior to C. P. 44-101 been apparent at the Reserve test field where the yields have been approximately equal (Tables 7 & 8). The outstanding characteristics have been relatively high sucrose and early maturity. These advantages are extremely important from the standpoint of early milling and more than compensate for relatively low tonnage. The stalks are relatively large in diameter, usually straight and of good milling quality. Stalks approximately 5 feet in length often weigh 2 pounds each or slightly more. For this reason "short" cane often gives surprisingly good tonnage providing stands are good. Growth in the spring and early summer is usually slow and, consequently, weeds are frequently a problem. Where weeds were controlled, excellent yields have been obtained. Drought tolerance is apparently low when compared with C. P. 44-101 and N. Co. 310. Good stands have been obtained in practically all test field plantings with good stubble crops following. Based on informa-

**TABLE 16**

**Yields for sugar cane varieties grown on Yahola very fine sandy loam near Bunkie, La., in 1956. (Shirley test field)**

| Variety | Age | Tons of cane per acre | Pounds of sugar per ton of cane | Sugar per acre | |
|---|---|---|---|---|---|
| | | | | Pounds | (per cent of 44-101) |
| C. P. 36-105 | Plant cane | 22.60 | 162.3 | 3668 | 123 |
| | First stubble | 17.27 | 189.1 | 3226 | 148 |
| | Average | 19.93 | 175.7 | 3502 | 134 |
| C. P. 44-101 | Plant cane | 16.95 | 176.5 | 2991 | |
| | First stubble | 11.17 | 195.5 | 21.84 | |
| | Average | 14.06 | 186.0 | 2615 | |
| C. P. 44-155 | Plant cane | 20.47 | 184.3 | 3772 | 126 |
| | First stubble | 18.95 | 230.0 | 4359 | 200 |
| | Average | 19.71 | 207.1 | 4082 | 156 |
| C. P. 47-193 | Plant cane | 19.32 | 189.0 | 3652 | 122 |
| | First stubble | 20.41 | 216.5 | 4419 | 202 |
| | Average | 19.86 | 202.7 | 4026 | 154 |
| C. P. 48-103 | Plant cane | 22.52 | 212.5 | 4786 | 160 |
| | First stubble | 21.86 | 230.5 | 5039 | 231 |
| | Average | 22.19 | 221.5 | 4915 | 188 |
| C. P. 48-117* | Plant cane | 19.72 | 178.8 | 3526 | 118 |
| | First stubble | 16.88 | 212.2 | 3582 | 164 |
| | Average | 18.30 | 195.5 | 3578 | 137 |
| C. P. 50-40* | Plant cane | 17.36 | 172.8 | 3000 | 100 |
| C. P. 51-21* | First stubble | ----- | 192.4 | ---- | |
| C. P. 51-24* | First stubble | ----- | 192.6 | ---- | |
| N. Co. 310 | Plant cane | 28.92 | 181.0 | 5235 | 175 |
| | First stubble | 30.41 | 209.5 | 6371 | 292 |
| | Average | 29.66 | 195.2 | 5790 | 221 |
| L.S.D. @ P.05 | Plant cane | 3.90 | 12.9 | 835 | 28 |

* Unreleased varieties.

Miscellaneous information pertaining to the Shirley test field for 1956.

1. Experiments conducted by the L. S. U. Agricultural Experiment Station in cooperation with the U. S. D. A. Sugar Cane Field Station, Houma, La., Haas Investment Co., and K. J. Ducote, County Agent, Avoyelles Parish.
2. **Planting dates:** Plant cane—10/4/55.
   First stubble—10/19/54.
3. **Fertilizers and interplanted green manure crops:** 90 lbs. nitrogen per acre on all tests, **Melilotus indica** turned under plant cane.
4. **Weed control methods:** Plant cane—T C A, 24 D on plant cane. Hand hoe and cultivation in stubble.
5. **Insect control:** Artificial release of Trichogramma parasites.
6. **Stands:** Good except where Dalapon was applied to plant cane. Stands were drastically reduced and cane was stunted where Dalapon was applied in 1955.
7. **Insect infestations:** Extremely heavy borer infestation.
8. **Weed infestations:** Heavy Johnson Grass infestation in stubble cane, moderate in plant cane.
9. **Varieties lodged at time of harvest:** None.
10. **Harvest methods and dates:** Plant cane cut by hand, stubble by machine. All plots weighed with small plot weighing device.
    Plant cane—11/12/56.
    First stubble—11/18/55, 11/12/56.
    (Second stubble was plowed out in the spring because of heavy Johnson grass infestation).
11. **Juice analyses:** By Houma laboratory from 20 stalks taken at random from each plot.
12. **Rainfall (inches) 1956:**

| | | | | | |
|---|---|---|---|---|---|
| January | 3.42 | May | 3.40 | September | 3.40 |
| February | 8.94 | June | 2.97 | October | 1.20 |
| March | 5.05 | July | 2.55 | November | 2.65 |
| April | 4.57 | August | 7.35 | December | 8.42 |
| | | | | Total | 53.92 |

(Rainfall data furnished by H. K. Bubenzer Farms, Inc.)

tion at all test field locations, producers in all areas should plant sufficient acreage for the first part of the milling season.

*N. Co. 310:* This variety has also exceeded C. P. 44-101 in yield of sugar per acre at most test fields. The major exceptions appear to be the yields for first stubble at the Reserve and Cinclare light soil test fields (Tables 7 & 11). No satisfactory explanation for this erratic behavior is known since relatively good stands have been obtained in stubble as well as plant cane. At the Shirley test field N. Co. 310 has been far superior to all other varieties in the tests and appears to be the most valuable cane for the Bunkie area at the present (Tables 15 & 16). Excellent vigor has been indicated by relatively high tons of cane per acre under rather adverse conditions such as Johnson grass infestation, borer infestation, drought and extremely heavy soils. The most serious disadvantage has been a tendency to lodge. For this reason it is probably advisable to restrict planting to lands where heavy growth is not expected. In some early harvested tests relatively low sucrose values have been obtained. However, later cuttings have often indicated sugar per ton values superior to C. P. 44-101. This late maturing characteristic may not be so serious when its ability to withstand some cold damage is considered. The stalks are relatively large and of good milling quality. A spreading top furnishes fairly early shading but not as early as Co. 290. Plants showing symptoms of mosaic have been frequently found in the test fields.

*C. P. 44-101:* This variety is planted more extensively at the present than any other. It has been found to be the best for general planting under most environmental conditions throughout the sugar

belt. One outstanding exception has been found in the Shirley test field where the varieties N. Co. 310, C. P. 48-103 and C. P. 47-193 have been far superior (Tables 15 & 16). Another exception has been found at the Billeaud test field where, all factors considered, C. P. 36-13 and N. Co. 310 apparently have been better varieties for general planting (Tables 3 & 4). Only plant cane and first stubble data have been obtained at the Billeaud test field, however. Since C. P. 44-101 has shown superior stubbling ability to C. P. 36-13 in other test fields different results may have been obtained if the tests were continued through second stubble. Except for the 2 cases previously cited, yields have been excellent in practically all areas. It has often been relatively late in maturing, however. Therefore, supplemental plantings of early maturing varieties such as C. P. 48-103 and C. P. 47-193 should be made for early harvesting. The stalks average slightly less than 1 inch in diameter, are usually erect and of good milling quality. Excellent yields have been obtained in stubble as well as plant cane.

*C. P. 47-193:* As an average for all light soil tests the sugar per acre yield has been approximately equal to C. P. 44-101. On Sharkey clay in West Baton Rouge Parish (Tables 13 & 14) and on Yahola very fine sandy loam in Avoyelles Parish (Tables 15 & 16), C. P. 47-193 has been better. Juice analyses have indicated good sucrose content in early harvested tests. Good stands have been obtained with relatively good stubble crops following. The growth type is somewhat spreading, similar to C. P. 36-105, but satisfactory for machine harvesting. The stalks are relatively small and milling qualities are not as good as C. P. 44-101. Severe borer damage has been observed where infestations were heavy. For this reason the acreage where borers are present should be limited.

*C. P. 36-105:* On light soil test fields in the Mississippi River-Bayou Lafourche area (Tables 7-12) and at the Shirley test field (Tables 15 & 16), C. P. 36-105 has been slightly exceeded by C. P. 44-101. In the Cinclare heavy soil test field (Tables 13 & 14) and at the Youngsville test field (Tables 5 & 6), C. P. 44-101 has been far superior. Yields in first stubble have been somewhat erratic with second stubble appearing relatively weak. Juice analyses from early harvested tests often indicate a slightly early maturity. Pathologists have found that heat treatment for control of the stunting disease effects a decided improvement in this variety. Therefore, it may be advisable to plant a limited acreage of C. P. 36-105 on the light soils of the Mississippi River-Bayou Lafourche area and in the Bunkie area.

*C. P. 36-13, C. P. 43-47 and C. P. 44-155:* Except for C. P. 36-13 at the Billeaud test field (Tables 3 & 4), these varieties have not done as well as C. P. 44-101. However, some excellent characteristics have been noted. For example all 3 have relatively good sugar content. C. P. 36-13 and C. P. 44-155 have excellent milling qualities and C. P. 43-47 is, perhaps, the best variety available for machine cutting. Yields for C. P. 43-47 have been extremely poor on Sharkey clay (Table 14) and in the Lafayette Parish test fields (Tables 3-6).

*Co. 290, C. P. 29-116 and C. P. 44-154:* Data for these varieties have been obtained at the Billeaud and Youngsville test fields during the past several years (Tables 3 & 6). All 3 have given excellent tonnage but most sucrose analyses have been low. Lodging has also been a serious disadvantage especially for C. P. 29-116 and C. P. 44-154. C. P. 44-154 is an extremely vigorous cane which usually gives excellent stubble crops. For this reason it may be used to advantage in limited quantity on some of the least productive soils. Co. 290 is still the best variety for shading the row

early in the season and therefore competes with weeds to a greater extent than other varieties. Co. 290 and C. P. 29-116 have excellent milling qualities. Co. 290 is susceptible to some of the common diseases of sugar cane while C. P. 29-116 seems to be highly resistant.


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Haas Investment Co. (Shirley Plantation), Bunkie, La.
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Louisiana State University, Agricultural Extension Service, Baton Rouge, La.
United States Department of Agriculture, Sugar Cane Field Station, Houma, La.
Young's Industries, Inc., Youngsville, La.



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# FERTILIZER INVESTIGATIONS ON SUGARCANE IN 1956

*By Lester G. Davidson, Research Agronomist, Crops Research Division, Agricultural Research Service, United States Department of Agriculture.*

*(Report to the Contact Committee of the American Sugar Cane League, June 20, 1957)*

During 1956, 15 field fertilizer experiments were conducted by the Houma Station on some of the major soil types used for sugarcane production in Louisiana. Sources of nitrogen used in the experiments were ammonium nitrate, aqua ammonia, and anhydrous ammonia. Ten of the experiments were conducted in cooperation with the agronomists of the Station at the outfield variety test fields. In most of the experiments the cane was cut by hand and weighed, using the Station cane weighing machine. Cane samples from each plot were ground and analyzed at the Houma Station. Tabulated data from these experiments show the crusher juice analyses, and yields of sugar per ton of cane as calculated by the Winter-Carp-Geerlings formula. Calculations were based on fresh, clean cane, properly hand topped. For this reason, the sugar per ton of cane values shown in the tabulated data are somewhat higher than would be obtained by use of the P.M.A. conversion table.

## Rate-of-Nitrogen Experiments

A study of the effects of different rates of nitrogen on yields of cane and sugar per acre and on juice quality was included in 6 experiments on plant cane, 7 on first stubble, and .2 on second stubble. The plant cane experiemnts at Bon Secour, Raceland, and St. John Plantations were fallow plowed preceding the cane; soybeans were plowed under before planting the cane at Oaklawn and Mandalay Plantations, and at the Houma Station.

TABLE 1

**Effects of 40 and 80 pounds of nitrogen per acre on light soil.***

**(Averages of 17 varieties of plant cane)**

| Plantation and date of harvest | Nitrogen per acre | Crusher juice analysis | | | Cane per acre | Sugar per acre |
|---|---|---|---|---|---|---|
| | | Brix | Sucrose | Purity | | |
| | pounds | | % | % | tons | pounds |
| Bon Secour | 40 | 17.69 | 15.32 | 86.60 | 22.95 | 4853 |
| 11-20-56 | 80 | 17.64 | 15.25 | 86.45 | 25.17 2/ | 5284 2/ |
| Oaklawn | 40 | 16.72 | 13.47 | 80.56 | 26.79 | 4762 |
| 11-28-56 | 80 | 16.82 | 13.49 | 80.20 | 29.03 2/ | 5175 2/ |
| Raceland | 40 | 16.88 | 14.18 | 84.00 | 24.68 | 4754 |
| 12-11-56 | 80 | 16.82 | 14.13 | 84.01 | 26.61 2/ | 5079 1/ |
| St. John | 40 | 17.29 | 14.12 | 81.67 | 26.34 | 4958 |
| 11-27-56 | 80 | 17.23 | 13.95 | 80.96 | 25.69 | 4798 |
| Averages | 40 | 17.14 | 14.27 | 83.26 | 25.19 | 4832 |
| Averages | 80 | 17.13 | 14.20 | 82.90 | 26.62 2/ | 5084 2/ |

[1] Significant at 5% level. [2] Significant at 1% level. * Agronomy variety test fields.

Table 1 shows the effects of 40 and 80 pounds of nitrogen per acre on plant cane on light soil in 4 agronomy outfield variety tests. Data for each nitrogen rate in each experiment are based on averages obtained from 2 plots of each of 17 varieties. The Brix, sucrose, and purity of the crusher juice were practically equal for the 2 nitrogen rates in each of the 4 experiments. Three of the 4 experiments showed significant increases in yields of both cane and sugar per acre from 80 pounds as compared to 40 pounds of nitrogen per acre.

Table 2 shows data from an experiment on Mhoon very fine sandy loam on Mandalay Plantation, with C. P. 36/13 and C. P. 44/101 plant cane. With no nitrogen, average yields of the two varieties were 24.28 tons of cane and 4970 pounds of sugar per acre. Significant yield increases amounting to about 4 tons of cane and 900 pounds of sugar per acre were obtained by the use of 40 pounds of nitrogen per acre. The additional yield increases from 80 pounds of nitrogen per acre, amounting to 1.75 tons of cane and 360 pounds of sugar per acre, were not significantly greater than yields from 40 pounds of nitrogen per acre. Yields from 120 pounds were significantly higher than from 40 pounds of nitrogen per acre, this increase amounting to 2.75 tons of cane and 550 pounds of sugar per acre. Brix, sucrose, and purity of the juice were almost identical for the 4 nitrogen rates used.

Table 3 presents data from an experiment on Mhoon silt loam on the Houma Station, with plant cane of 4 varieties. The sucrose was not appreciably reduced by the nitrogen treatments. Average yields of cane

TABLE 2
MANDALAY PLANTATION
Houma, La.

Plant cane—1956

Mhoon very fine sandy loam — Two varieties

| Fertilizer treatments N - $P_2O_5$ - $K_2O$ | Crusher juice analysis | | | Cane per acre | Indicated available 96° sugar at harvest | |
|---|---|---|---|---|---|---|
| | Brix | Sucrose | Purity | | per ton of cane | Per acre |
| pounds per acre | | % | % | tons | pounds | pounds |
| | | C. P. 44/101 | | | | |
| 0-0-0 | 17.80 | 14.97 | 84.10 | 26.10 | 205.5 | 5364 |
| 0-50-50 | 17.28 | 14.26 | 82.52 | 27.00 | 193.8 | 5233 |
| 40-0-0 | 17.82 | 15.03 | 84.34 | 30.22 | 206.7 | 6246 |
| 40-50-50 | 17.90 | 15.14 | 84.58 | 28.25 | 208.5 | 5890 |
| 80-0-0 | 17.60 | 14.82 | 84.20 | 29.54 | 203.6 | 6014 |
| 80-50-50 | 17.86 | 15.10 | 84.55 | 31.40 | 207.9 | 6528 |
| 120-0-0 | 17.94 | 15.19 | 84.67 | 33.32 | 209.3 | 6974 |
| 120-50-50 | 17.79 | 15.03 | 84.49 | 27.93 | 206.8 | 5776 |
| | | C. P. 36/13 | | | | |
| 0-0-0 | 17.52 | 15.00 | 85.62 | 21.22 | 211.9 | 4497 |
| 0-50-50 | 17.71 | 15.02 | 84.81 | 22.80 | 211.2 | 4815 |
| 40-0-0 | 17.34 | 14.63 | 84.37 | 27.54 | 205.1 | 5648 |
| 40-50-50 | 17.38 | 14.68 | 84.46 | 27.85 | 206.0 | 5737 |
| 80-0-0 | 17.42 | 14.56 | 83.58 | 29.03 | 203.2 | 5899 |
| 80-50-50 | 17.82 | 15.06 | 84.51 | 30.88 | 211.4 | 6528 |
| 120-0-0 | 17.26 | 14.61 | 84.65 | 29.87 | 205.2 | 6129 |
| 120-50-50 | 17.33 | 14.52 | 83.79 | 33.68 | 202.9 | 6834 |

Data are averages of 4 plots, each 3 rows wide by 30 feet long. Planted September 20, 1955, with progeny of heat-treated seed. Fertilized March 26, 1956; harvested December 11, 1956.

and sugar per acre were significantly increased by 40 pounds of nitrogen per acre as compared to the unfertilized controls, and further significant yield increases were obtained by the use of 80 pounds of nitrogen per acre. Average yields obtained from the use of 0, 40, 80, and 120 pounds of nitrogen per acre amounted to 20.7, 24.3, 26.5, and 27.8 tons of cane per acre, respectively.

A summary of rate-of-nitrogen experiments on plant cane on light soil showed the following:

1. Yields of cane and sugar per acre were significantly increased by 80 pounds of nitrogen as compared to 40 pounds per acre in 4 out of 5 experiments.

2. In one experiment in which nitrogen was applied at 0, 40, 80, and 120 pounds per acre, yields of cane and sugar per acre were significantly increased by 40 pounds as compared to no nitrogen, and by 120 pounds as compared to 40 pounds of nitrogen per acre. The joint fertilizer recommendations of the State and Federal Stations is to

TABLE 3.
HOUMA STATION
Plant cane—1956

Mhoon silt loam — Four varieties

| Nitrogen per acre | Crusher juice analysis | | | Cane per acre | Indicated available 96° sugar at harvest | |
|---|---|---|---|---|---|---|
| | Brix | Sucrose | Purity | | Per ton of cane | Per acre |
| pounds | | % | % | tons | pounds | pounds |
| | | | C. P. 44/101 | | | |
| 0 | 17.82 | 15.04 | 84.40 | 23.57 | 206.9 | 4877 |
| 40 | 18.09 | 15.33 | 84.74 | 25.58 | 211.3 | 5405 |
| 80 | 17.67 | 14.68 | 83.08 | 29.13 | 200.2 | 5832 |
| 120 | 17.67 | 14.68 | 83.08 | 29.27 | 200.2 | 5860 |
| | | | C. P. 36/13 | | | |
| 0 | 18.27 | 15.89 | 86.97 | 19.25 | 226.3 | 4356 |
| 40 | 18.02 | 15.41 | 85.52 | 22.42 | 217.6 | 4879 |
| 80 | 17.94 | 15.38 | 85.73 | 25.43 | 217.5 | 5531 |
| 120 | 17.71 | 14.81 | 83.63 | 26.68 | 206.7 | 5515 |
| | | | C. P. 48/103 | | | |
| 0 | 18.37 | 15.82 | 86.12 | 15.53 | 224.2 | 3482 |
| 40 | 18.59 | 16.01 | 86.12 | 20.40 | 226.9 | 4629 |
| 80 | 18.32 | 15.78 | 86.14 | 22.80 | 223.7 | 5100 |
| 120 | 19.00 | 16.64 | 87.58 | 22.59 | 237.8 | 5372 |
| | | | N. Co. 310 | | | |
| 0 | 18.05 | 15.37 | 85.15 | 24.57 | 212.4 | 5219 |
| 40 | 17.78 | 15.00 | 84.36 | 28.65 | 206.3 | 5910 |
| 80 | 18.44 | 15.73 | 85.30 | 28.51 | 217.6 | 6204 |
| 120 | 17.62 | 14.71 | 83.48 | 32.51 | 201.2 | 6541 |

Data are averages of 3 plots, each 3 rows wide by 26 feet long. Planted September 13, 1955, with progeny of heat-treated seed. Fertilized March 27, 1956; harvested November 29, 1956

TABLE 4.

Effects of 80 and 120 pounds of nitrogen per acre on light soil.*
(Average of 8 varieties of first stubble cane)

| Plantation and date of harvest. | Nitrogen per acre | Crusher juice analysis | | | Cane per acre | Sugar per acre |
|---|---|---|---|---|---|---|
| | | Brix | Sucrose | Purity | | |
| | pounds | | % | % | tons | pounds |
| Alma | 80 | 16.92 | 13.87 | 81.97 | 30.98 | 5699 |
| 11-12-56 | 120 | 16.94 | 13.75 | 81.17 | 29.56 | 5307 |
| Bon Secour | 80 | 17.64 | 15.15 | 85.88 | 25.03 | 5202 |
| 11-7-56 | 120 | 17.30 | 14.59 | 84.34 | 26.16 | 5197 |
| Oaklawn | 80 | 17.86 | 14.85 | 83.15 | 29.72 | 5928 |
| 11-5-56 | 120 | 17.66 | 14.45 | 81.82 | 32.06 | 6236 |
| Raceland | 80 | 17.32 | 14.91 | 86.09 | 28.88 | 5925 |
| 12-14-56 | 120 | 16.87 | 14.33 | 84.94 | 31.13 | 6098 |
| Lovert-St. John | 80 | 17.08 | 13.30 | 77.87 | 30.42 | 5238 |
| 10-29-56 | 120 | 17.21 | 13.71 | 79.66 | 29.11 | 5228 |
| Averages | 80 | 17.36 | 14.42 | 83.06 | 29.01 | 5598 |
| Averages | 120 | 17.20 | 14.17 | 82.38 | 29.60 | 5613 |

Yields of cane and sugar per acre for the 2 nitrogen rates did not differ significantly in any of the above experiments.

* Agronomy variety test fields.

TABLE 5.

OAKLAWN PLANTATION
Franklin, La.

First stubble cane—1956

Baldwin silt loam C. P. 44/155

| Fertilizer treatments N - $P_2O_5$ - $K_2O$ - Mo 1/ | Crusher juice analysis | | | Cane per acre | Indicated available 96° sugar at harvest | |
|---|---|---|---|---|---|---|
| | Brix | Sucrose | Purity | | Per ton of cane | Per acre |
| pounds per acre | | % | % | tons | pounds | pounds |
| 80-0-0-0 | 17.93 | 15.30 | 85.33 | 17.21 | 211.7 | 3665 |
| 80-0-0-1/7 | 17.77 | 15.17 | 85.37 | 17.04 | 209.9 | 3577 |
| 80-60-60-0 | 17.58 | 14.74 | 83.85 | 19.26 | 202.0 | 3891 |
| 80-60-60-1/7 | 17.44 | 14.57 | 83.54 | 17.53 | 199.3 | 3494 |
| 120-0-0-0 | 17.72 | 15.16 | 85.55 | 17.73 | 210.0 | 3723 |
| 120-0-0-1/7 | 17.87 | 15.23 | 85.23 | 18.07 | 210.6 | 3806 |
| 120-60-60-0 | 18.22 | 15.56 | 85.40 | 17.89 | 215.3 | 3852 |
| 120-60-60-1/7 | 18.15 | 15.57 | 85.79 | 19.90 | 216.0 | 4298 |

Yields of cane and sugar per acre did not differ significantly at 19 to 1 odds.

[1] 1/7 pounds Molybdenum was applied in the form of hydrated sodium molybdate at the rate of 5 ounces per acre.

Data are averages of 4 plots, each 6 rows wide by the full length of the cut, having an average area of about 0.4 acre. Fertilizer applied April 13, 1956; cane harvested October 31, 1956. Fertilizer materials used were aqua ammonia, 0-14-14, and hydrated sodium molybdate. The cane was cut by machine, burned, and weighed on the factory scale.

apply 40 to 60 pounds of nitrogen per acre on plant cane on light soil. The results presented in this report show significant yield increases from rates somewhat higher than those recommended. This is the first year that plant cane has shown consistent significant yield increases from nitrogen applications higher than the recommended rates.

Table 4 shows the effects of 80 and 120 pounds of nitrogen per acre on first stubble cane on light soil in 5 agronomy outfield variety tests. Data for each nitrogen rate in each experiment are based on averages obtained from 2 plots of each of 8 varieties. The average sucrose wa slightly reduced by the higher nitro gen treatment. None of the experi ments showed significant yield dif ferences for the 2 rates of nitroge used. Average yields for the 5 ex periments were almost identical.

Table 5 presents data from an ex periment on Baldwin silt loam o Oaklawn Plantation, with C. P 44/155 first stubble cane. Average of the first 4 treatments supplyin 80 pounds of nitrogen per acre an the last 4 treatments supplying 12 pounds of nitrogen per acre sho practically equal juice sucrose an purities and yields of cane and sug

TABLE 6.
HOUMA STATION

First stubble cane

Mhoon silty clay loam — Four varieties

| Nitrogen per acre | Crusher juice analysis | | | Cane per acre | Indicated available 96° sugar at harvest | |
|---|---|---|---|---|---|---|
| | Brix | Sucrose | Purity | | Per ton of cane | Per acre |
| pounds | | % | % | tons | pounds | pounds |
| | | | C. P. 44/101 | | | |
| 0 | 18.75 | 16.34 | 87.15 | 26.86 | 228.5 | 6138 |
| 40 | 18.55 | 15.98 | 86.15 | 30.02 | 222.1 | 6667 |
| 80 | 17.77 | 15.20 | 85.54 | 33.48 | 210.5 | 7048 |
| 120 | 17.77 | 15.26 | 85.88 | 33.30 | 211.8 | 7053 |
| | | | C. P. 47/193 | | | |
| 0 | 18.35 | 16.04 | 87.41 | 18.47 | 220.2 | 4067 |
| 40 | 18.38 | 16.22 | 88.25 | 23.92 | 223.7 | 5351 |
| 80 | 18.65 | 16.50 | 88.47 | 23.01 | 227.9 | 5244 |
| 120 | 18.36 | 15.76 | 88.84 | 23.65 | 214.4 | 5071 |
| | | | C. P. 48/103 | | | |
| 0 | 18.98 | 16.78 | 88.41 | 17.08 | 240.9 | 4115 |
| 40 | 19.05 | 16.77 | 88.03 | 20.71 | 240.3 | 4977 |
| 80 | 18.46 | 16.18 | 87.65 | 21.18 | 231.3 | 4899 |
| 120 | 18.71 | 16.48 | 88.08 | 22.68 | 236.2 | 5357 |
| | | | C. P. 50/11 | | | |
| 0 | 16.82 | 13.85 | 82.34 | 28.19 | 188.0 | 5300 |
| 40 | 16.20 | 12.72 | 78.52 | 33.98 | 168.1 | 5712 |
| 80 | 17.10 | 13.54 | 79.18 | 36.62 | 179.8 | 6584 |
| 120 | 17.02 | 13.56 | 79.67 | 39.10 | 180.7 | 7065 |

Data are averages of 2 plots, each 3 rows wide by 30 feet long. Fertilized March 27, 1956; harvested November 15, 1956.

r per acre.

Table 6 shows data from an experiment with first stubble cane of varieties of Mhoon silty clay loam n the Houma Station. Average ucrose and purity of cane fertilized vith 40, 80, and 120 pounds of nirogen per acre were practically qual. Average yields of the 4 vaieties obtained with 0, 40, 80, and 20 pounds of nitrogen per acre vere 22.6, 27.2, 28.6, and 29.7 tons f cane, respectively. The yield diferences between 0 and 40, and 40 nd 120 pounds of nitrogen per acre vere significant.

In a second stubble experiment on the agronomy outfield variety test on light soil on Raceland Plantation, no appreciable differences were obtained in juice quality or in yields of cane and sugar per acre from the use of 80 and 120 pounds of nitrogen per acre.

Table 7 shows data for second stubble cane of 4 varieties on Mhoon silty clay loam on the Houma Station. Average sucrose was not decreased by any of the nitrogen rates used. Average yields of cane were significantly increased by the use of 80 pounds as compared to 0 or 40 pounds of nitrogen per acre. Average yields from the 120 pound

TABLE 7.
HOUMA STATION
Houma, La.—1956
Second stubble cane
Mhoon silty clay loam — Four varieties

| Nitrogen per acre | Crusher juice analysis | | | Cane per acre | Indicated available 96° sugar at harvest | |
|---|---|---|---|---|---|---|
| | Brix | Sucrose | Purity | | Per ton of cane | Per acre |
| pounds | | % | % | tons | pounds | pounds |
| | | | C. P. 36/105 | | | |
| 0 | 17.08 | 14.19 | 83.08 | 13.39 | 186.0 | 2491 |
| 40 | 17.74 | 15.23 | 85.85 | 14.60 | 203.0 | 2964 |
| 80 | 17.48 | 14.70 | 84.10 | 19.12 | 193.9 | 3707 |
| 120 | 16.80 | 13.69 | 81.49 | 15.73 | 177.5 | 2792 |
| | | | C. P. 44/101 | | | |
| 0 | 17.08 | 14.62 | 85.60 | 21.88 | 202.6 | 4433 |
| 40 | 17.87 | 15.13 | 84.67 | 24.96 | 208.5 | 5204 |
| 80 | 17.52 | 14.58 | 83.22 | 26.42 | 199.1 | 5260 |
| 120 | 17.63 | 14.68 | 83.27 | 26.30 | 200.5 | 5273 |
| | | | C. P. 50/11 | | | |
| 0 | 17.00 | 13.74 | 80.82 | 9.84 | 181.0 | 1781 |
| 40 | 17.70 | 14.64 | 82.71 | 10.20 | 195.3 | 1992 |
| 80 | 16.98 | 13.93 | 82.04 | 7.74 | 185.0 | 1432 |
| 120 | 17.30 | 14.29 | 82.60 | 10.06 | 190.5 | 1916 |
| | | | N. Co. 310 | | | |
| 0 | 17.94 | 15.22 | 84.84 | 19.00 | 209.9 | 3988 |
| 40 | 18.14 | 15.57 | 85.83 | 22.08 | 216.0 | 4769 |
| 80 | 18.02 | 15.54 | 86.24 | 27.77 | 216.1 | 6001 |
| 120 | 18.37 | 15.65 | 85.19 | 32.66 | 216.3 | 7064 |

Data are averages of 2 plots, each 3 rows wide by 30 feet long.
Fertilized March 27, 1956; harvested November 9, 1956.

## TABLE 8.

**Comparative yield increases of selected varieties from applications of 40 and 80 pounds of nitrogen per acre in plant cane, and 80 and 120 pounds in first stubble. Top figure in each group of three is for the lower rate; second is for the higher rate; third shows gain (or loss) due to the higher rate.**

| Plant cane | | | | First stubble cane | | | | Combined tests | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C/A* | S/A* | C/A | S/A | C/A | S/A | C/A | S/A | C/A | S/A | C/A | S/A |
| C.P. 44/101 (14 tests) | | N.Co. 310 | | C.P. 44/101 (10 tests) | | N.Co. 310 | | C.P. 44/101 (24 tests) | | N.Co. 310 | |
| 27.49 | 5104 | 29.34 | 5626 | 28.75 | 5390 | 31.20 | 5671 | 28.02 | 5223 | 30.12 | 5645 |
| 29.27 | 5343 | 29.99 | 5687 | 31.24 | 5693 | 32.44 | 5869 | 30.09 | 5489 | 31.01 | 5763 |
| 1.78 | 239 | .65 | 61 | 2.49 | 303 | 1.24 | 198 | 2.07 | 266 | .89 | 118 |
| C.P. 44/101 (9 tests) | | C.P. 36/13 | | C.P. 44/101 (4 tests) | | C.P. 36/13 | | C.P. 44/101 (13 tests) | | C.P. 36/13 | |
| 25.12 | 4894 | 24.71 | 4763 | 21.64 | 3539 | 21.75 | 3863 | 24.05 | 4477 | 23.80 | 4486 |
| 27.31 | 5227 | 26.97 | 5086 | 25.87 | 4360 | 24.08 | 4191 | 26.87 | 4960 | 26.08 | 4811 |
| 2.19 | 333 | 2.26 | 323 | 4.23 | 821 | 2.33 | 328 | 2.82 | 483 | 2.28 | 325 |
| C.P. 44/101 (15 tests) | | C.P. 48/103 | | C.P. 44/101 (11 tests) | | C.P. 48/103 | | C.P. 44/101 (26 tests) | | C.P. 48/103 | |
| 27.49 | 5142 | 23.39 | 5157 | 28.64 | 5472 | 24.75 | 5436 | 27.97 | 5282 | 23.96 | 5275 |
| 29.35 | 5373 | 23.24 | 5059 | 30.88 | 5758 | 24.68 | 5410 | 30.00 | 5535 | 23.85 | 5208 |
| 1.86 | 231 | -.15 | -98 | 2.24 | 286 | -.07 | -26 | 2.03 | 253 | -.11 | -67 |
| C.P. 44/101 (14 tests) | | C.P. 36/105 | | C.P. 44/101 (11 tests) | | C.P. 36/105 | | C.P. 44/101 (25 tests) | | C.P. 36/105 | |
| 27.24 | 4875 | 26.83 | 4771 | 27.81 | 5015 | 24.11 | 4539 | 27.49 | 4937 | 25.64 | 4669 |
| 28.77 | 5080 | 27.27 | 4686 | 29.95 | 5242 | 25.06 | 4521 | 29.29 | 5151 | 26.30 | 4613 |
| 1.53 | 205 | .44 | -85 | 2.14 | 227 | .95 | -18 | 1.80 | 214 | .66 | -56 |
| C.P. 44/101 (12 tests) | | C.P. 44/155 | | C.P. 44/101 (9 tests) | | C.P. 44/155 | | C.P. 44/101 (21 tests) | | C.P. 44/155 | |
| 26.44 | 4898 | 24.55 | 4816 | 27.60 | 5124 | 25.36 | 4775 | 26.94 | 4995 | 24.90 | 4798 |
| 28.23 | 5109 | 25.82 | 4879 | 29.73 | 5365 | 22.11 | 4106 | 28.87 | 5218 | 24.23 | 4548 |
| 1.79 | 211 | .27 | 63 | 2.13 | 241 | -3.25 | -669 | 1.93 | 223 | -.67 | -250 |

* C/A = Tons of cane per acre; S/A = pounds of sugar per acre.

rate were not significantly higher than were obtained from 80 pounds of nitrogen per acre.

A summary of the 9 rate-of-nitrogen experiments on stubble cane showed no significant increases in yields of cane or sugar per acre from 120 pounds as compared to 80 pounds of nitrogen per acre. These data are in good agreement with our joint fertilizer recommendations (for nitrogen) of 80 to 100 pounds of nitrogen per acre on stubble cane.

### N-P-K Experiments

In the plant cane experiment on Mandalay Plantation, shown in table 2, average increases from the use of phosphate and potash with the nitrogen were small and were not significant. Average sucrose and purities were not affected by the use of complete mixtures as compared to nitrogen alone.

In the first stubble cane on Oaklawn Plantation, shown in table 5 yields were increased by 1.1 tons of cane and 200 pounds of sugar per acre by the use of complete mixtures as compared to nitrogen alone, but these differences were not significant.

Fertilizer recommendations were prepared jointly by the Louisiana Agricultural Experiment Station and the Houma Station of the U. S. Department of Agriculture, based on results of field fertilizer experiments conducted by the two stations during the past several years. There is no change in these recommendations which have been published in the February 15, 1957, issue of *The Sugar Bulletin*.

### Variety X Nitrogen Interaction Experiments

This type of study was included in 14 experiments: 6 with plant cane, 6 with first stubble, and 2

with second stubble. These experiments were designed to determine the relative response to nitrogen of the important commercial and promising unreleased varieties of sugarcane, in order that growers may apply more nitrogen to varieties that show a profitable response to higher applications, and also to have this information available at the time a variety is released.

Of the 6 plant cane experiments, showed a significant variety x nitrogen interaction. This was the experiment on Bon Secour Plantation, conducted in cooperation with the agronomists. At this location the yield of N. Co. 310 was increased from 21.61 to 31.24 tons of cane per acre with 80 pounds of nitrogen as compared to 40 pounds per acre, while the yield of C. P. 29/320 was decreased from 18.85 to 15.85 tons of cane per acre with 80 pounds of nitrogen per acre as compared with 40 pounds.

The variety x nitrogen interaction was almost significant in the experiment on Mandalay Plantation (table 2). C. P. 44/101 gave a gain in average yield of 2.7 tons of cane per acre for the first 40 pounds of nitrogen, (40-0-0 and 40-50-50) 1.2 tons for the second 40 pounds, and practically no gain for the third 40 pounds. Yields of C. P. 36/13 increased about twice as much for the first and second 40-pound increments of nitrogen, with an additional increase of 1.8 tons per acre for the 120-pound as compared to the 80-pound rate.

The variety x nitrogen interaction was highly significant both for cane and sugar per acre in the second-stubble experiment on the Houma Station, shown in table 7. This table shows that yields of C. P. 50/11 were practically the same for all rates of nitrogen used, while yields of N. Co. 310 increased appreciably with each increase in the rate of nitrogen.

Table 8 shows comparative yield increases of some commercial varieties as plant cane with 40 and 80 pounds of nitrogen per acre and as first stubble cane using 80 and 120 pounds of nitrogen per acre. The table includes all tests for a 3-year period. Each variety is compared with C. P. 44/101 as a standard. C. P. 44/101 showed larger increases in yield of sugar per acre from the higher rate of nitrogen fertilization than any variety with which it was compared, in both plant cane and first stubble. The combined tests show yield increases for N. Co. 310 and C. P. 36/13 with the higher rates of nitrogen, but not as large as for C. P. 44/101. The data indicate that yields of C. P. Nos. 48/103, 36/105, and 44/155 are not increased by the higher rates of nitrogen fertilization. Tests have not been continued long enough to draw definite conclusions.

### Minor-Element Experiment

Experiments in Australia and New Zealand have shown that use of a few ounces of sodium molybdate per acre greatly increased yields on large acreages of crop land, especially on acid soils. Data from an experiment of this type on Oaklawn Plantation are shown in table 5. Five ounces of sodium molybdate per acre, applied with nitrogen alone and with complete mixtures, had no effect on yields of cane or sugar per acre.

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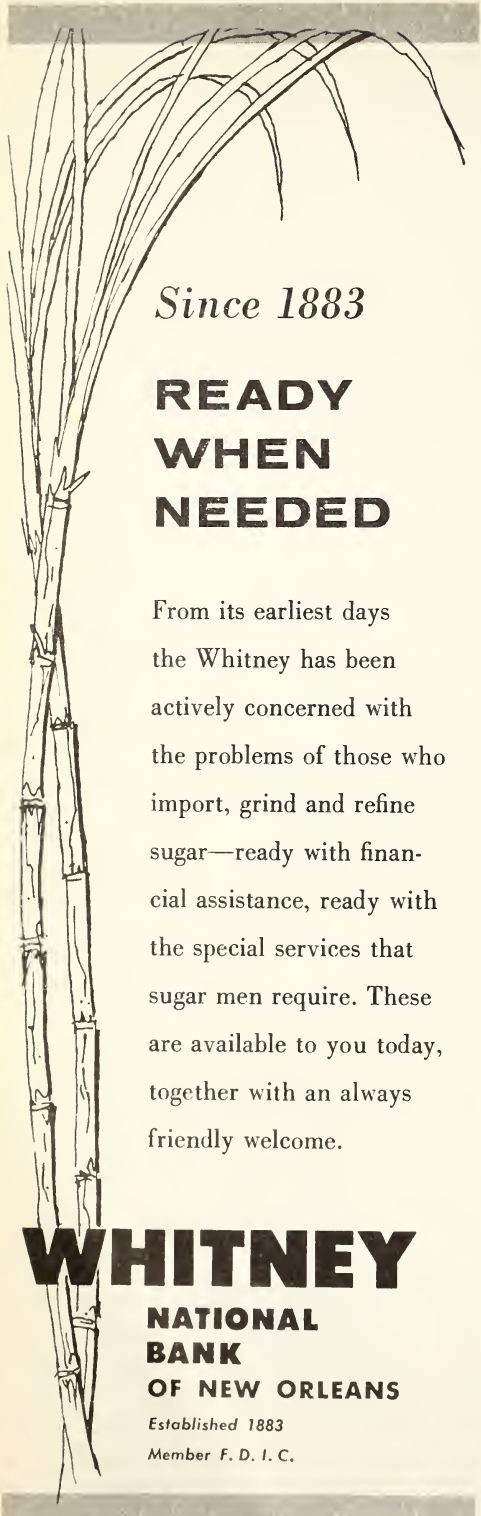

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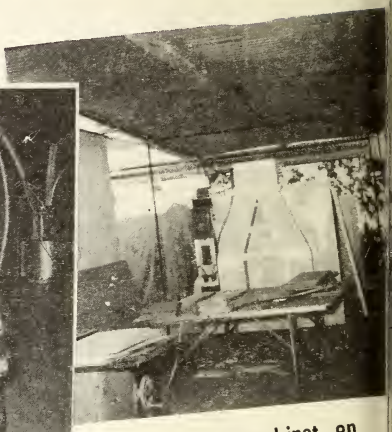

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# THE SUGAR BULLETIN

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Published on the First and Fifteenth of each month
in the interests of the Domestic Sugar Cane Industry

THE
# SUGAR BULLETIN

414 Whitney Bldg., New Orleans 12

Gilbert J. Durbin, Editor — Andrew W. Dykers, Managing Editor

Lloyd L. Lauden, Agronomist and Field Representative

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# UP FRONT WITH THE LEAGUE

*by A. W. Dykers*

## Why Not Call A Spade A Spade

The so-called "World" sugar market is the dumping ground for residual sugars; a sort of place of last resort to which, in normal times, sellers relegate the sugar they have been unable to sell to their regular customers. Naturally, this market, except on rare occasions, belongs strictly to the buyers. Sellers vie to see just how much cutting must be done in order to make a sale.

**We suggest that this dumping place for left-over sugar be shorn of its high sounding "World" title and, henceforth, be known as the "Residual Sugar Market," which is what it actually is.**

Perhaps if we can picture this market in its true perspective as the place where the "dregs" of the sugar production of the world are sold, it will lose its hold on the sugar trade and especially on the minds of the men who administer the Sugar Act.

We repeat that we believe the Sugar Act was made a law of our land so that our Domestic market would be more or less immune to outside influences. Developments of the past few months clearly show that this objective has not been accomplished. The tail is wagging the dog, which is not good.

## Wage-Price Hearing

We were unable to report it in our August 15th issue, but the Government Wage-Price Hearing came off as per schedule on August 8th in the Thibodaux City Hall Auditorium.

Representing the Government were the two very competent old regulars, Al Greenwood and Ward Stevenson, and a newcomer, Bill Garrott, who also was very competent.

## Wages

By unanimous consent, the wage part of the hearing was first on the agenda. Dr. Joe R. Campbell, who makes the agricultural costs studies for L.S.U., took the stand and put some interesting data into the record about the cost of producing sugar cane on large and small farms. Apparently the industry is doing better on the cost of producing a ton of cane but practically all gains have been nullified by the low sugar price policy of the Government.

T. M. Barker, Chairman of the Labor Committee of the American Sugar Cane League, read the prepared brief of the industry relative to wages. He recommended the following wage increases purely as a humane measure and not because profits justified the additional expense.

| **Harvesting 1957 crop** | Recommended Rate per hour |
|---|---|
| Cutters, toppers, strippers, scrappers behind loader | .60 |
| Loaders, spotters, ropemen, grabmen | .65 |
| Cutters and loaders, pilers, hoist operators | .60 |
| Tractor drivers, truck drivers, and harvester bottom blade operators | .70 |
| Teamsters | .65 |
| Operators of mechanical loading or harvesting equipment | .75 |
| All other harvesting equipment workers | .55 |

(Continued on page 382)

# IN THE FIELD WITH LLOYD LAUDEN

*by Lloyd L. Lauden*

## Can The Louisiana Sugar Industry Use Some Varieties Of Cane That Lodge

*(Presented to the 1957 Summer Meeting, American Society of Sugar Cane Technologists, Baton Rouge, La.)*

History proves that the Louisiana sugar industry has met and overcome its many problems through the application of hard work and sweat, backed by the strong will of the men who were dedicated to its survival. No single catastrophe since the Civil War has been so great as that which happened in the middle twenties; the near fall of the industry due to a complete deterioration of the noble canes. In 1926, Louisiana produced only 47,000 tons of raw sugar. The State average was 6.8 tons of cane per acre. In 1956, Louisiana produced 431,000 tons of sugar, raw value, with a State average of 23.7 net tons of cane per acre.

The increased production since 1926 has been due to many things but most important is the production of new varieties, tailor made for Louisiana conditions by outstanding sugarcane scientists. The cane breeding, selection, testing, and subsequent release of improved varieties through the cooperative program of the United States Department of Agriculture, Louisiana Agricultural Experimental Station, and the American Sugar Cane League, has supplied the very life blood of this industry.

Sugar cane breeding for Louisiana conditions has not been an easy job. The plant breeders have been confronted with at least two more problems than those confronting the sugar cane breeders in most other countries; namely, a very short growing season and the need for erect varieties. In spite of this, the program over the years has been most successful.

Since 1930, many thousand varieties have been planted and studied for adaptation to Louisiana conditions. Approximately 70,000 separate and distinct varieties are now being planted at the L.S.U. and Houma stations each year. During the past 27 years, 25 varieties have met minimum standards to be released for commercial use. Of this number, about one-half have occupied a substantial acreage in the State. Few of these varieties have enjoyed general soil and area adaptability. Today C. P. 44-101 occupies 53% of the cane acreage in the State.

For a variety to meet with industry approval, it must have certain qualities or characteristics called standards. Standards are determined and set by the Louisiana sugar industry in conference with the scientists of L.S.U. and the U.S.D.A. After the standards are set, the breeding, selection, and testing program attempts to conform to the wishes of the industry. Some of the important standards are: good sucrose content, satisfactory yield, good stubbling ability, some resistance to disease and insects, good keeping quality following cutting or after freezes, early maturity, and erectness for mechanical harvesting.

(Continued on page 380)

# IN WASHINGTON WITH JOE FERRIS

*by Josiah Ferris*

All members of Congress from the Mainland Cane Sugar Area have been disturbed by the government's failure to take prompt and effective measures to prevent further decline of the domestic raw sugar price which has been falling rapidly during the past few weeks.

In commenting on the situation, Congressman Edwin E. Willis of the Third District of Louisiana, in which most of Louisiana's sugar is produced, said:

"After a year's trial, the amendments to the Sugar Act made during the last session of Congress appear to have been highly successful, particularly the 'growth formula' which has enabled nearly all of the producers in Louisiana to dispose of their burdensome over-quota surplus sugar.

"Unfortunately the top-heavy estimate of sugar consumption for 1957, now 9,200,000 tons recently has depressed the price of raw sugar considerably below the level of the price formula in the Sugar Act.

"I have been endeavoring to convince the Secretary of Agriculture that his current estimate of consumption is still much too high and it is my hope that he will further reduce the estimate so as to stimulate the price by the time the Louisiana sugar crop goes to market this fall."

Louisiana's senior Senator, Allen J. Ellender, who for many years has been the champion not only of Louisiana sugar but also the spokesman on many occasions for the entire domestic sugar producing industry, has been particularly active in urging remedial administrative orders which could stop the sugar price decline. On August 20, 1957 Senator Ellender sent Mr. Lawrence E. Myers, Chief, Sugar Division U. S. Department of Agriculture the following message by telegraph:

"Louisiana sugar cane producers greatly disturbed at drastic decline in raw sugar prices stop the 100,000-ton reduction in quota announced by department last week is step in right direction but not heavy enough to restore stability to domestic market stop I wish to strongly urge that you announce immediately a further reduction of 200,000 tons to bring total quota more in line with 1957 anticipated consumption."

Under date of August 21, 1957, Mr. Myers answered Senator Ellender's telegram as follows:

"This is in reply to your telegram of August 20 calling attention to the decline in prices of raw sugar and suggesting that total quotas be reduced 200,000 tons in addition to the 100,000 ton reduction already made.

"The concern of Louisiana growers over the decline in raw sugar prices can be understood. The Department's action in reducing quotas by 100,000 tons was, of course, to stabilize the market.

"To date this year, develop-

(Continued on page 382)

# USDA ANNOUNCES REDUCTION IN 1957 SUGAR QUOTA

*(Official Release)*

On August 9th the U. S. Department of Agriculture announced that the estimate of domestic sugar requirements (total quotas) was being reduced from 9,300,000 tons to 9,200,000 tons.

This action was taken because considerations for this action follows:

"On July 5 the estimate of consumers' sugar requirements (total quotas) was increased 200,000 tons to a total of 9,300,000 short tons, raw value. That increase in total

**1957 SUGAR QUOTAS AND "D. C. LIMITS"**

| Area and Country | Proration of Deficits | New Quotas Adjusted for Proration of Deficit | Decrease from Previous Quotas | New Direct-Consumption Limit Within Quota |
|---|---|---|---|---|
| | | (short tons, raw value) | | |
| Domestic beet sugar | 136,112 | 2,134,829 | 42,376 | no limit |
| Mainland cane sugar | 41,884 | 656,908 | 13,039 | no limit |
| Hawaii | (15,479) | 1,100,000 1/ | 00 1/ | 31,403 |
| Puerto Rico | (246,375) | 920,000 1/ | 00 1/ | 136,113 |
| Virgin Islands | (905) | 15,000 1/ | 00 1/ | 00 |
| Republic of the Philippines | | 980,000 | 00 | 59,920 |
| Cuba | 84,763 | 3,145,238 | 29,175 | 375,000 |
| Peru | | 86,867 | 4,330 | 9,827 |
| Dominican Republic | | 71,557 | 4,950 | 8,761 |
| Mexico | | 54,609 | 5,100 | 15,914 |
| Nicaragua | | 12,879 | 574 | 10,494 |
| Haiti | | 6,597 | 209 | 6,597 |
| Netherlands | | 3,592 | 70 | 3,592 |
| China | | 3,505 | 59 | 3,505 |
| Panama | | 3,505 | 59 | 3,505 |
| Costa Rica | | 3,498 | 59 | 3,498 |
| Canada | | 631 | 00 | 631 |
| United Kingdom | | 516 | 00 | 516 |
| Belgium | | 182 | 00 | 182 |
| British Guiana | | 84 | 00 | 84 |
| Hong Kong | | 3 | 00 | 3 |
| All other countries | | 00 | 00 | 00 |
| Total | | 9,200,000 | 100,000 | |

[1] Expected deliveries. Despite declaration of deficits, full basic quotas are available to these areas as follows: Hawaii 1,115,479; Puerto Rico 1,166,375; Virgin Islands 15,905 short tons, raw value.

the upward pressure on prices during May and June was reversed in July and because there is now no inadequacy of current offerings of supplies.

The full statement of bases and quotas was not occasioned by the prospect that the sugar would be consumed in 1957 but rather to provide quota to sellers willing to bring forth current supplies needed to

(Continued on page 379)

# JOHNSON GRASS AND CORN AS CARRIERS OF THE VIRUS OF RATOON STUNTING DISEASE OF SUGARCANE[1]

*R. J. Steib and I. L. Forbes*

Experiments conducted in the greenhouse have shown that Johnson grass and corn plants are carriers of the ratoon stunting disease virus. Corn and Johnson grass plants which had been inoculated with the stunting disease virus showed no external symptoms. However, when juice from these plants was inoculated into sugarcane, symptoms of the disease developed.

In November of 1956 an experiment was made in the greenhouse in which juice was expressed from corn plants that had been inoculated three times with virus from ratoon stunting diseased sugarcane but had developed no disease symptoms. Healthy seed pieces of C. P. 44-101 were inoculated with the expressed juice. Juice from healthy, not-inoculated corn plants was inoculated into other seed pieces of C. P. 44-101 as checks. As additional checks, healthy C. P. 44-101 and seed pieces inoculated with virus from ratoon stunting diseased sugarcane were planted.

On May 4, 1957, all plants of C. P. 44-101 were cut, split lengthwise, and examined for pink discoloration at the base of young nodes near the growing point of such plants. The results are given in Table 1.

On June 25, 1957, an experiment was made in the greenhouse to determine whether or not Johnson grass may be a carrier of the ratoon stunting disease virus. The sugarcane variety inoculated was C. P. 44-101. On July 31, 1957 the sugarcane plants were cut, split lengthwise, and examined. A pink discoloration at the base of young nodes near the growing point was taken as positive evidence of the disease. Results are presented in Table 2.

**TABLE 1**

**C.P. 44-101 free of ratoon stunting disease, inoculated with juice from:**

| | No. Plants Examined | No. Plants Diseased |
|---|---|---|
| 1. Corn plants previously inoculated with the virus but developing no symptoms | 10 | 7 |
| 2. Non-inoculated corn plants | 10 | 0 |
| 3. Diseased C.P. 44-101 | 10 | 10 |
| 4. Healthy C.P. 44-101 | 10 | 0 |

**TABLE 2**

**C.P. 44-101 free of ratoon stunting disease, inoculated with juice from:**

| | No. Plants Examined | No. Plants Diseased |
|---|---|---|
| 1. Johnson grass, stems and leaves. (Johnson grass had been inoculated through rhizomes 3 months earlier). | 26 | 25 |
| 2. Johnson grass, stems and leaves, from Cinclare Plantation, near ditch bank, showing Orange red coloration at the nodes. | 14 | 0 |
| 3. Check, disease-free C.P. 44-101 | 16 | 0 |
| 4. Check, disease free C.P. 44-101, but inoculated with juice from diseased C.P. 44-101 | 11 | 11 |

In a previous experiment of December 18, 1956, which was read February 25, 1957, it was found that juice from supposedly diseased Johnson grass plants from the field (plants showed nodal discoloration) and juice from symptomless Johnson grass plants from the field, when inoculated into healthy C. P. 44-101 did not produce ratoon stunting disease symptoms.

From results obtained it is evident that Johnson grass may, under field conditions, act as a carrier of the virus of ratoon stunting disease. It is questionable, however, that dis-

(Continued on page 379)

# THE LOUISIANA SUGARCANE VARIETY CENSUS FOR 1957

*By Leo P. Hebert, Research Agronomist, Crops Research Division, Agricultural Research Service, United States Department of Agriculture* [1]

With the generous assistance of the County Agents in 16 of the sugar-producing parishes of the State the annual variety census has just been completed. As in the past, the County Agents conducted a survey in their respective parishes to determine as nearly as possible the percentage of the acreage of sugarcane for sugar occupied by each of the important commercial varieties. Results are summarized herein for the State as a whole and for each of the generally recognized areas of the Louisiana sugar district—Northern, Southeastern, and Southwestern. The acreage included in this survey constitutes more than 98 percent of the State proportionate share of cane grown by farmers participating in the State sugar program of the Agricultural Stabilization and Conservation Service of the U.S.D.A.(1).

Table 1 presents the results of the 1957 variety census, including (A) the percentage of the acreage in each of 12 varieties by areas and for the State as a whole, and (B) the relative change in variety position during recent years.

With 53.07 percent of the acreage devoted to it, C. P. 44/101 leads all other varieties for the fourth consecutive year. It is also of interest to note that more than half of the acreage in each of the areas is planted in C. P. 44/101. There is only 1 parish, Avoyelles, in which it was not the leading variety, and only 3, Lafayette, St. John, and Avoyelles, in which it did not occupy over 50 percent of the cane acreage.

C. P. 36/105 is still in second place in the State with 14.54 percent of the acreage, but ranks third in the Southwestern area with less than 8 percent. It was the most widely planted variety in only one parish (Avoyelles) of the 16 parishes surveyed. (Data not shown)

In third place in the State, and second in the Southwestern area, is C. P. 44-155, with slightly more than 10 percent of the acreage in the State as a whole. The 14 percent of the acreage devoted to the variety in the Southwestern part of the Sugar Belt is nearly double the percentage it occupies in either the Northern or Southeastern areas.

Moving up to fourth place in the State with 5.47 percent of the acreage is N. Co. 310. The most extensive increase of this variety has been in the Northern and Southeastern areas while in the Southwestern area it occupies only 2.92 percent of the cane acreage. C. P. 36/13 occupies 3.54 percent of the State acreage to rank fifth in order. It is fairly well distributed in each of the 3 areas as well as in each of the 16 parishes. C. P. 43/47 with 2.47 percent is in sixth place. Most of the plantings of that variety are in the Southeastern area.

Each of the following 6 varieties occupies less than 2 percent of the acreage: C. P. 48/103, C. P. 47/193, C. P. 29/116, C. P. 44/154, C. P. 34/120, and Co. 290, and in the aggregate they equal approximately 8 percent of the State cane acreage. Co. 290, C. P. 29/116, and C. P. 44/154 are planted in the Southwestern area almost exclusively. C. P. 34/120 is found principally in the Northern area.

## Time-Related Changes in Varietal Utilization

Table 1(B) and Fig. 1 give the changes in percent of the State acreage occupied by important varieties in recent years. There was very little change registered by the different varieties in the past year. The gain of 2.33 and 1.34 percent

## TABLE 1.
**Results of the 1957 variety census.**

(A) Percentage of the acreage in each of 12 varieties for each area of the Louisiana Sugar District, and for the State, 1957 crop.

| Area | VARIETY | | | | | | | | | | | Other varieties | Percent of State acreage[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C.P. 44/101 | C.P. 36/105 | C.P. 44/155 | N.Co. 310 | C.P. 36/13 | C.P. 43/47 | C.P. 48/103 | C.P. 29/116 | C.P. 47/193 | Co. 290 | C.P. 44/154 | C.P. 34/120 | | |
| Southeastern[2] | 53.79 | 18.24 | 7.84 | 6.45 | 3.01 | 3.63 | 2.61 | 0.11 | 2.16 | 0.19 | 0.56 | 0.64 | 0.77 | 46.83 |
| Southwestern[3] | 54.48 | 7.96 | 14.66 | 2.92 | 4.20 | 1.29 | 0.96 | 4.49 | 0.54 | 3.68 | 2.66 | 0 | 2.16 | 36.16 |
| Northern[4] | 51.54 | 19.66 | 6.68 | 8.76 | 3.84 | 1.89 | 1.95 | 0 | 1.83 | 0 | 0 | 2.33 | 1.52 | 15.87 |
| State | 53.07 | 14.54 | 10.03 | 5.47 | 3.54 | 2.47 | 1.88 | 1.67 | 1.50 | 1.42 | 1.22 | 0.67 | 1.38 | 98.86 |

(B) Relative change in variety position, expressed in percent increase (+) or decrease (—) of surveyed acreage.

| Period | C.P. 44/101 | N.Co. 310 | Co. 290 | C.P. 44/155 | C.P. 44/154 | C.P. 36/13 | C.P. 34/120 | C.P. 43/47 | C.P. 29/116 | 36/105 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1956-57 | +2.33 | +1.34 | +0.20 | 0.13 | -0.15 | -0.16 | -0.28 | -0.60 | -1.12 | -4.22 |
| 1953-57 | +32.77 | +5.47 | -4.45 | +2.60 | +0.74 | -3.94 | -3.84 | +0.48 | -5.29 | -22.23 |

[1] Taken from "Cropland-Proportionate share-Planted acres of Louisiana sugarcane farms participating in the sugar program by parishes". Sug. Bull. 32(22): 331. August 15, 1956.
[2] Ascension, Assumption, Lafourche, St. Charles, St. James, St. John, and Terrebonne,
[3] Iberia, Lafayette, St. Martin, St. Mary, and Vermilion.
[4] Avoyelles, Iberville, Pointe Coupee, and West Baton Rouge.

by C. P. 44/101 and N. Co. 310, respectively, although relatively low, represents a fairly large increase in acreage because of greater quota allotments permitting the planting of more acres of cane. With the exception of decreases of 4.22 and 1.12 percent in C. P. 36/105 and C. P. 29/116, respectively, there were essentially no changes in percent of the acreage occupied by any of the other varieties from 1956 to 1957 for the State as a whole.

The most important changes in varietal utilization during the 5-year period from 1953-1957, have been the increase of 32.77 percent in the acreage of C. P. 44/101 and the 22.23 percent decrease in C. P. 36/105. Most of the land formerly devoted to C. P. 36/105 has been planted with C. P. 44/101 during the past 5 years, but a few others, such as C. P. 44/155 and, particularly, N. Co. 310, made some gain in that period. Varieties that once occupied fairly large acreages, such as Co. 290 and C. P. 34/120, continued to decline in percent of the cane acreage and are presently going out of the picture in all but a few places where both varieties still can be used. In Lafayette Parish, for example, Co. 290 still makes up 37 percent of the acreage but 2 parishes that formerly planted extensive acreages of Co. 290, St. Mary and Iberia, now report less than 1 percent of the acreage in the variety. Most of the plantings of C. P. 34/120 are found in the Northern area, with 2 parishes, Avoyelles and Pointe Coupee, registering 4 and 5 percent of the acreage, respectively, in that variety. Like Co. 290, it is no longer considered an important variety and should be replaced with others which are giving better yields in the Northern area.

An inspection of Fig. 1 shows the changes that have taken place in variety utilization in Louisiana during the past 17 years. At the beginning of the period plantings in 2 of the varieties, Co. 290 and C. P. 29/320, constituted approximately 60 percent of the acreage in the State, with Co. 290 planted on 40 percent of the area, but predominately in the Southwestern part of the Sugar Belt. For an interval of several years beginning with 1945,

(Continued on next page)

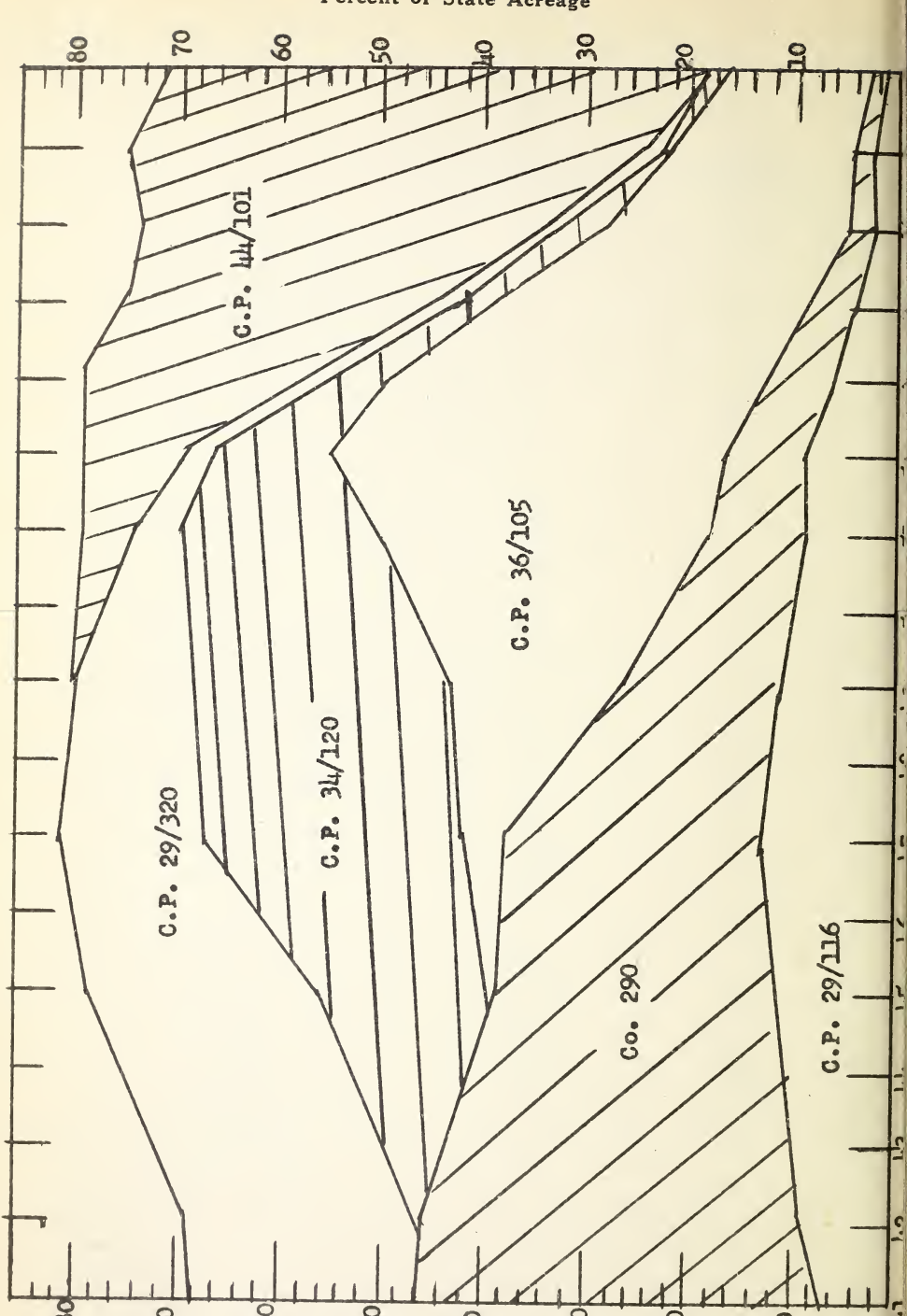


Fig. 1. Changes in the distribution of Louisiana sugarcane acreage among important varieties during the period 1941-1957, inclusive.

the State used 3 major varieties, Co. 290, C. P. 29/320, and C. P. 34/120, to make up 60 percent of the plantings, each occupying about a third of this acreage, and each adapted to a particular area. Since 1953, 2 varieties, C. P. 36/105 and C. P. 44/101, have occupied from 56 to 69 percent of the acreage; they have become the most widely used varieties in Louisiana in many years, and are the ones that have been most generally adapted to all areas.

It might be permissible to speculate, in a general way, on the effect of varietal utilization on cane production in the State in recent years. As cited above, C. P. 44/101 is a variety of wide adaptation that occupies over 50 percent of the plantings in all 3 areas of the Belt. In 6 of the 16 parishes it occupies from 55 to 67 percent of the acreage. Also of importance is the fact that results of all our variety tests show that it has outyielded all important widely grown varieties in the principal cane-growing areas of Louisiana in cane and sugar yields per acre and in milling qualities, although the variety has not performed as well in the extreme northern portion of the Northern area where the cane acreage constitutes less than 2 percent of the plantings in the State. In a previous publication (2) it was shown that the change in variety utilization since 1953 has contributed toward the higher sugar yields because of the widespread use of C. P. 44/101 with its above-average milling and juice extraction qualities. It is believed that the general use of the variety contributed materially toward raising the average yield in the State from approximately 20 tons per acre in 1953, for instance, to over 24 tons in 1956 (1). These 2 qualities of the variety, i.e., good milling properties and good yielding ability, in addition to others, are largely responsible for its widespread use and justify the growers' confidence in growing C. P. 44/101.

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2. Hebert, L. P. Comparison of indicated sugar yields of important varieties on different dates during recent years at Houma, Louisiana. The Sug. Bull. 35(12): 168-171. 1957.

[1] The author is indebted to the following County Agents who supplied the information on varietal plantings in the various parishes: Claude Songy, E. J. Lousteau, K. J. Ducote, W. E. Williams, Edward Burleigh, S. J. Bowles, A. J. Brackin, C. J. Arceneaux, Sterling Deville, A. J. Melancon, Jr., Kermit Coulon, V. G. Calandro, Stanley Angelle, P. J. de Gravelles, Richard Sonnier, Murphy Veillon and H. A. Webb.

## JOHNSON GRASS

(Continued from page 375)

coloration at nodes of Johnson grass stems is a symptom of the stunting disease in that plant.

Since there is strong evidence that the virus may be spread by field implements to sugarcane from Johnson grass plants arising from old rhizomes, it is recommended that treated seed and progeny from treated seed should be planted in fields free from Johnson grass.

[1] Steindl, D. R. L. The Cane Growers' Quarterly Bulletin, Bureau of Sugar Experiment Station, Bisbone, Australia. V. 20, No. 3, page 101. January 1, 1957.

## QUOTAS

(Continued from page 374)

check an unwarranted increase in prices. The price of raw sugar, duty paid at New York, had risen from an average of 6.13 cents during the first four months of the year to 6.60 cents largely in response to an increase in world market prices from 3.25 cents per pound in early November 1956 to a high of 6.85 cents on April 22, 1957.

"Since the end of June raw sugar prices have been declining. On August 8 the world market price was 4.10 cents per pound, or 2.05 cents lower than at the beginning of July and 2.75 cents below the high regis-

(Continued on next page)

tered on April 22. The domestic price was 6.15 cents per pound, duty paid, or .45 cent per pound below the high of July 5.

"Adequate supplies of sugar are now on offer in the domestic market and in view of the reversed price trend in the world market, upward pressure on the domestic price has been removed. Accordingly, total quotas are hereby reduced 100,000 tons to 9,200,000 short tons, raw value."

The new quotas and quantities that may be brought in for direct consumption are shown in the accompanying table.

—o—

## IN THE FIELD

(Continued from page 372)

To expect all these qualities in one variety is to almost expect the impossible. This is very evident to those conducting the selection work after checking many thousand new varieties each year. Because it has been very difficult to find in one variety all the qualities mentioned earlier, one or two standards have been lowered in some instances to allow a variety to be released. This was done only when a variety had special locality adaptation or had other good qualities that could offset the undesirable characteristics. In general, it is fair to say that with the information available at the time of any variety's release, minimum standards were adhered to.

Since the advent of the mechanical harvester, every attempt has been made to closely adhere to the standards set for erectness. It is important to note that C. P. 44-154 was released only for the western area and it was considered borderline for mechanical harvest at the time of its release, and this was pointed out in the release statement. It is also a fact that N. Co. 310 did not lodge to any great extent before its release as evidenced by the fact the release report stated; "in erectness of growth and in diameter of stalks, N. Co. 310 is intermediate between Co. 290 and C. P. 44-101, and in most cases it can be satisfactorily harvested by machine."

Throughout the breeding, selection, and testing program, and since the advent of the mechanical harvester, special emphasis has been given to erectness of varieties suitable for mechanical harvesting. The aim was to select and test erect varieties because the industry wanted erect varieties for the mechanical harvester. Varieties that lodged to any great extent were not considered because they were not acceptable.

The value of the conventional cane harvesters is known to everyone in this industry. It is almost impossible to imagine this industry without these machines.

The recent development of the pick-up attachment for the mechanical harvester could possibly change the whole concept of what constitutes suitable growth habits for cane under Louisiana conditions. Grower acceptance of this apparatus will in time decide this. There were many pick-up attachments in the fields during the 1956 harvesting season, and reports indicate that they did a satisfactory job.

Hurricane Flossy did her share in sponsoring the machines. There were many in the industry who were justifiably concerned over the great amount of wind-downed cane following the storm. Harvesting rates during the first two weeks of grinding were slow in areas affected by the storm, but cane delivery became normal soon thereafter. Harvesting costs were certainly higher.

Not taking into consideration storms, certain varieties of cane have greater tendencies than others to lodge. In general, high yielding varieties lodge more than low yielding varieties. It is also true that more lodging will occur in a given variety as yields increase. It has also been stated that any and all

varieties lodge to some extent when yields reach 30 to 35 tons of cane per acre. If this is true, and the industry is not willing or ready to accept a variety that lodges, a ceiling is automatically placed on cane production per acre.

If on the other hand, the industry is ready and willing to accept a variety that lodges, the research workers are anxious to know this. They are anxious to please the industry. The program must anticipate the future, as breeding, selecting, testing, and then releasing a new cane variety requires 8 to 10 years.

The Farm Machinery Advisory Committee, at its last meeting, recommended that some consideration be given varieties that lodge, providing, of course, these varieties also possess high yielding ability and good sugar content.

Many in the industry have shown their willingness to accept N. Co. 310. Many plan to increase the variety this planting season in spite of its lodging characteristics. N. Co. 310 is not brittle and, therefore, does not break up during harvest.

Two varieties, both possessing lodging tendencies, will be transferred to secondary increase stations this year. One of these, C. P. 51-24, had been discarded earlier because of lodging tendencies. However, the Sub-Committee on Varieties chose to reconsider this variety in view of the industry's acceptance of N. Co. 310.

The cane harvester manufacturers believe that the pick-up attachment will be improved. One cane harvester representative states:

> "The future development of the pick-up attachment will depend almost entirely upon the amount of cane other than erect, which is harvested each year. The only way to perfect any part of the sugar cane harvester is through more or less constant use, making improvements yearly during the harvest season."

He also states:

> "It seems proper to say at this time that the best method of approach for the industry would simply be to increase the amount of N. Co. 310 each year. It would then soon become necessary to increase the use of the pick-up devices each year so that the entire impact would not come all at once. If this increase of N. Co. 310 could be properly controlled, it would be comparatively easy to solve the problem without serious loss during any one year.

Another manufacturer of Louisiana cane harvesters, states:

> "It has been our outlook during the past few years to direct all of our thinking and designs toward the problem of lodged cane. Several attachments have been developed and worked fairly well under the recent conditions."

The primary aim of the breeding program should continue to be one which will give the industry a high yielding, good sucrose cane, which is suitable for mechanical harvesting.

The development of the pick-up attachment to the cane harvester will now permit the selection of some varieties with greater lodging tendencies than could have been tolerated in the past.

It is logical to expect that if the standard for erectness is lowered, higher yielding varieties can be selected.

The United States Sugar Corporation, Clewiston, Florida, produced 37.94 net tons of cane per acre in 1955. Direct labor costs for cutting cane during that season was $0.679 per ton of net cane. In 1956, the United States Sugar Corporation produced an average yield of 44.5 tons of cane per acre with a total production of 941,841 tons of cane. These yields were produced with varieties that lodge.

(Continued on next page)

In the writer's opinion, it will be very difficult to develop a variety for Louisiana which will produce more than 35 tons of cane per acre State average, without substantial lodging. Since economic factors will probably make it necessary that Louisiana produce much higher yields in the future, it appears that growers must accept varieties which lodge to some extent.

—o—

## IN WASHINGTON

(Continued from page 373)

ments in the world sugar market have had a major influence on the domestic market. While the world market was strong, the domestic market was strong also. You will recall that the world market reached a peak of 6.85 cents per pound, f.a.s. Cuba in late April and then held rather steady until July when it started a rapid decline that carried it to a low point of 3.75 cents per pound in August, a total decline of 3.10 cents per pound. The domestic market reached a peak of 6.55 in early July and has recently fallen to a low point of 6.10, a decline of 0.45 cent per pound. The decline in the world market, therefore, has been seven times as great as the decline in the domestic market. Clearly, therefore, the situation in the domestic market has been one of comparative strength.

"In studying the situation, it is significant that the supplies of sugar in the world market appear to be small. At times there was considerable talk in trade circles about shortages and the danger that old crop supplies would be exhausted before new crop supplies would become available. A large part of the decline in the world market in recent weeks has been attributed to the selling of Brazilian supplies which, in terms of annual world requirements, constituted a small quantity of sugar. It is not surprising, therefore, that the world market has shown an ability to recover with equal abruptness. Yesterday the world spot price rose 23 cents and today it rose an additional 37 cents per hundred pounds. A more adequate measure of the recovery in the world market is shown by future prices. Last Friday the September world future closed at 3.41 cents per pound; Monday it closed at 3.74; yesterday it closed at 4.00 and today it closed at 4.26-27 cents per pound, a recovery of .85 cent per pound in three trading days.

"Whether the recovery in the world market will continue and whether conditions in the world market will continue to influence the domestic market, as they have so far this year, cannot now be determined. We hope, however, that the situation will have been clarified well in advance of the coming Louisiana harvest season. As always, we appreciate the information you submitted and shall keep your views in mind in considering market trends and requirements.

Other members of the House and Senate delegation who discussed the price situation with Mr. Myers and officials of the Department of Agriculture join in the hope which Mr. Myers expresses in the last paragraph of his letter—"that the situation will have been clarified well in advance of the coming Louisiana harvest season."

—o—

## UP FRONT

(Continued from page 371)

| | Recommended Rate per ton |
|---|---|
| Cutting top and bottom: | |
| Large barrel varieties | 1.10 |
| Small barrel varieties | 1.30 |
| **Production and Cultivation, calendar year 1958** | **Recommended Rate per hour** |
| Tractor drivers | .60 |
| All other production and cultivation workers | .50 |

Mr. Barker ended his testimony with the following remarks:

"In conclusion, I cannot overlook his opportunity to again urge that he Secretary of Agriculture so administer the sugar program as to permit sugar to be marketed at a price comparable to other commodities, the increase in price of which commodities has caused the cost of living to soar to unprecedented heights. It is only in this manner that the economy of the sugar cane producers and the sugar cane workers may be maintained at a proper level."

After Mr. Barker's testimony, James Graugnard, Chairman of the Sugar Committee of the Farm Bureau, and the representatives of the various Parish Farm Bureau committees endorsed the recommendations presented by Mr. Barker.

Henry Pelet, representing the United Agricultural Workers Union, settled into the witness chair immediately after lunch and read his prepared brief. He said that the L.S.U. and U.S.D.A. cost studies were wrong and proposed that a joint study be conducted by his Union and the American Sugar Cane League apparently to show L.S.U. and the U.S.D.A. experts how to properly evaluate data. Upon questioning, it was discovered however that Mr. Pelet had never read the U.S.D.A. studies but, anyway, he recommended a dollar an hour minimum wage, regardless.

### Prices

Two witnesses were heard during the fair price part of the hearing. They were Irving Legendre, who represented the Grower - Processor Committee, and James Graugnard, who represented the Farm Bureau.

The brief that the growers and processors had approved for presentation by Mr. Legendre called for a shortening of the sugar pricing period from the last Thursday in April date of last year to the last Thursday in February; a period of 21 weeks instead of 29 weeks. It also recommended a uniform pro forma payment to growers by the mills of at least 90 percent of the weekly average price of cane and blackstrap molasses.

The Farm Bureau brief, read by Mr. Graugnard, also recommended the 21 week pricing period but, in addition, recommended that the definition of salvage cane be changed to read as follows:

"Salvage sugar cane means sugar cane containing less than 9.5 per cent sucrose in the normal juice *and* less than 68 per cent purity in the normal juice." The definition used last season defined salvage sugar cane as containing "*either* less than 9.5 per cent sucrose in the normal juice *or* less than 68 purity in the normal juice."

The big change in the two definitions is, of course, the suggested use of the word "and" for the word "or". Mr. Graugnard also recommended that the normal juice sucrose and purity table be extended below 9.5 sucrose and 68 purity to "allow application of one method of settlement for all salvage cane."

### John Wilbert Dies

It is certainly with deep regret that we report the death of Mr. John Wilbert, a prominent member of the Wilbert family of Plaquemine, La. Mr. Wilbert died at his home in Plaquemine on Sunday, August 18, 1957. He was 71 years old.

At the time of his death, Mr. Wilbert was Vice President of the Iberville Trust and Savings Bank; Chairman of the Board of the A. Wilbert's Sons Lumber and Shingle Co.; and a director of the Iberville Building and Loan Association. His cousin, Ivan M. Wilbert, is a member of the Executive Committee of the American Sugar Cane League.

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THE SUGAR BULLETIN

l. 35 — No. 24 SEPTEMBER 15, 1957

*icial Bulletin of the American Sugar Cane League of the U. S. A.*

Announcing The

# THIRTY-FIFTH ANNUAL MEETING

of the

# AMERICAN SUGAR CANE LEAGUE

of the

# U. S. A., Inc.

## THURSDAY, SEPTEMBER 26th, 1957

GRAND BALLROOM, ROOSEVELT HOTEL
123 Baronne Street
New Orleans, La.
Meeting Convenes at 2:00 P. M.

At this meeting there will be an election of Officers and Members of the Executive Committee to serve during the ensuing year.

**All Members of the League Will Please Consider This as an Official Notice To Attend**

Just as we go to press word is received of the death of Stephen C. Munson, Chairman of the League's Contact Committee. Mr. Munson died at his summer home in Pass Christian, Mississippi in the early morning hours of September 14, 1957.

THE
# SUGAR BULLETIN

414 Whitney Bldg., New Orleans 12

Gilbert J. Durbin, Editor — Andrew W. Dykers, Managing Editor

Lloyd L. Lauden, Agronomist and Field Representative

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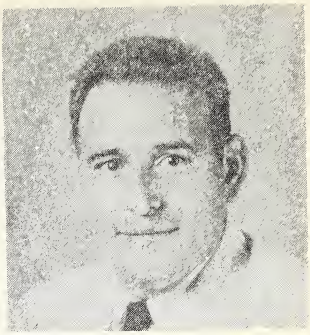
# IN THE FIELD WITH LLOYD LAUDEN

*by Lloyd L. Lauden*



Most of the sugar crop has been very dry for about one month and some sections have been dry since Hurricane Audrey. Effects of this drought can be seen both in the color of the cane and the reduced growth rate over the past month.

Terrebonne and West Baton Rouge parishes seem to have been less affected by the drought and the cane there appears more vigorous. The Lower Lafourche Area from Mathews down the bayou also appears vigorous and growth there has been good. The cane in the Western Area and along the Teche was more severely affected by Hurricane Audrey and has suffered more severely from drought following Audrey. The cane in the area appears off-color and shorter than cane in other areas.

A good gentle, soaking, all day rainfall could do much to help the crop. Stands are very good in more than 95 per cent of the crop, and all that is needed now is more height. There is still a very good crop in the field.

Cane which was treated to control Stunting Disease certainly looks good. The treated cane appears more vigorous and has better color than field-run cane in spite of drought conditions. Stalk size of treated cane is impressive, particularly C. P. 36-105.

Many farmers are now purchasing heat treated seed from neighbors and friends. More of this should be done.

There were ten new heat treating units purchased this year. Six new units were installed along the Teche and four on the Lafourche. These units have been checked and are in operation now. Farmers who plan to purchase units next year should place orders early. It appears that the manufacturer of the treating units has had difficulty securing proper thermoswitches and some of the units have been shipped out with improper switches. The manufacturer will replace these switches with recommended switches when they are received.

Farmers who are treating cane should occasionally check the weight of the cane being treated. Racks should be loaded with 2000 to 2200 lbs. of cane. Racks loaded to this amount usually give good treatment results. Racks which are loaded too lightly usually give poor germination of seed, and racks loaded too heavily can be expected to result in poor control of the disease.

Many farmers are using chlordane on heavy soils at the time of planting this year. Results from this practice have been good. Many farmers have reported good stands as a result of this practice in fields where good stands had never been received before. The cost of using chlordane is certainly not prohibitive and farmers who have experienced poor stands in certain fields should give it a trial. County Agents will be happy to furnish information on the use of this material.

# IN WASHINGTON WITH JOE FERRIS

*by Josiah Ferris*

The Number One farm problem, in the opinion of farm leaders and congressmen, is the necessity for reuniting the strife-torn Farm Block prior to the return of Congress next January. Wide differences of opinion between farm leaders in the 85th Congress almost totally destroyed the effectiveness of the heretofore closely knit Farm Bloc.

If important farm legislation is to be passed next year the wounds suffered when they fought among themselves in the congressional session just ended must be healed. With that objective in mind the policy-making heads of the big four farm organizations — the Grange, the Farm Bureau, the Farmers Union and the National Council of Farmer Cooperatives met in Washington September 13th, in a most unusual off-the-record session. The principal item on the agenda was a discussion of a closer working relationship on farm legislation.

Another important meeting for discussion of the same topic is scheduled for Washington on September 25th and 26th by the National Conference of Commodity Organizations. It is understood that some 30 or 40 general farm and commodity groups will be represented at the meeting to present ideas on an omnibus farm bill.

Other important meetings dealing with the farm problem have been scheduled for October, November and December. A consumer price study group headed by Representative Anfuso plans to hold hearings in New York on October 8th and 9th.

The Family Farms Subcommittee of the House Committee of Agriculture plans to hold hearings in November. The big farm fireworks however, may occur during a five-day round table debate of farm policy between agricultural Policy subcommittee of the Congressional Joint Economic Committee headed by Senator John Sparkman, scheduled for Washington, December 16th to 20th. Senator Sparkman of Alabama has long been a leading member of the so-called Farm Bloc. During the five-day round robin in Washington, he will "explore the causes of farm problems and the implications of alternative means of dealing with them". Farm organization leaders have been requested to present papers on specific topics. Ten panel discussions, each dealing with a different phase of the farm problem are scheduled. The subjects will include; (1) price support programs, (2) export markets, (3) the role of agriculture in the total economy, (4) the role of parity as a price guide, (5) production control and adjustment programs, (6) farm credit, (7) two-price and compensatory payment programs. One thing sure, under Senator Sparkman's able, guiding hand there will be plenty of Democratic political fodder.

Unless there should be unexpected unity among the farm groups and Secretary of Agriculture Ezra Taft

(Continued on page 391)

# EFFECTS OF CERTAIN DEFOLIANTS AND GROWTH REGULATORS UPON SUGARCANE

*By R. E. Coleman, Plant Physiologist, and L. P. Hebert, Research Agronomist, Crops Research Division, Agricultural Research Service, United States Department of Agriculture.*

The Farm Machinery Advisory Committee of the American Sugar Cane League recently requested information on the use of defoliants, desiccants, and growth regulators as pre-harvest treatments to aid in the harvesting of sugarcane. The U. S. Sugarcane Field Station at Houma undertook such studies several years ago. However, the results of these studies did not indicate any practical application and therefore were not reported. In view of the recent interest in this subject, the results are now being made available to the industry.

Interest in the use of defoliants has undoubtedly been stimulated by reports of their successful use in cotton and other crops. However, the cotton plant differs from the sugarcane plant in that it possesses a definite abcission layer at the base of the petiole which actually undergoes a physiological change resulting in the abscission of the leaf. No such structure occurs in the sugarcane plant; dropping of leaves is merely the result of a mechanical disturbance of the dead leaves. Therefore the only practical approach to defoliating sugarcane appears to be through bringing about a killing of the leaves in order that they may be more easily removed mechanically or by burning.

## Experimental Data

Several tests were conducted in 1951 with compounds known to be effective defoliants in cotton and with other compounds known to have growth-regulating properties. The purpose of these tests was to measure the effects of defoliants upon sucrose content and the effect of growth-regulating compounds upon maturity. Theoretically it seemed possible that some of the compounds might hasten the maturity of sugarcane through a retardation of vegetative growth.

In two separate tests comparisons were made of the effects of 2,4-D and 2,4,5-T, which are proven herbicides, and maleic hydrazide, a known growth retardent, on yield of sugar per ton of cane. These were tested as foliar sprays on variety C. P. 36/105 in separate applications on August 31 and September 27. The 2,4,-D and 2,4,5-T were used in concentrations of 200, 600, and 1000 ppm, at the rate of 90 gallons of solution per acre, and the maleic hydrazide at the rate of 500, 1500, and 2500 ppm, using the same amount of solution. Average yields of sugar per ton of cane 28 days after the first application and 13 days after the second, showed no significant differences between the treatments.

In another test the effects of two concentrations of 2,4,-D (1 and 3 pounds per acre) and a commercial defoliant containing sodium chlorate and sodium pentaborate [1] on sugar per ton were compared with untreated sugarcane. Analysis for yield of sugar per ton obtained 18 days after the treatment showed a significant depression in yield with the commercial defoliant at the 30-pound per acre rate. A similar tendency toward reduced yields was shown at 25 and 39 days after treatment. Both rates of 2,4,-D significantly increased the yield of sugar at 8 days but showed no increased when analyzed 25 and 39 days after treatment. This increase in yield following the 2,4,-D treatment was contrary to results obtained in the previous test, and in subsequent

(Continued on next page)

tests at this station, Puerto Rico 1, 2) and Australia (3).

Various defoliants and 2,4,-D were tested in another experiment using variety C. P. 36/105. The defoliants tested included 2 formulations from Chapman Chemical Company containing pentachlprophenol, endothal (disodium 3,6-endoxohexydrophthalate), 2 unidentified products from Lion Oil Company, and "Shed-A-Leaf". These compounds were applied October 15, 1951, and sugar-per-ton determinations made 4 and 11 days afterward. Observations made after the treatments indicated that none of these compounds, at the rates used, except possible "Shed - A - Leaf" at 30 pounds per acre, effectively killed the leaves. Sucrose determinations made at 4 and 11 days after treatment showed no significant differences in yield of sugar between the 2 sampling dates. The greatest depression in yield of sucrose occurred with the plants treated with "Shed-A-Leaf" at 30 pounds per acre.

During 1951, maleic hydrazide was applied in another test at higher rates than previously used, again attempting to retard vegetative growth and hasten maturity. Foliar applications of 2 percent and 6 percent solutions at the rate of 90 gallons per acre were made on October 16 with variety C. P. 34/120. Subsequent sampling of these plots at 7, 11, 17, and 37 days showed no significant increase in purity or sugar per ton from either application.

In the summer of 1952, 3 other growth-regulating compounds were tested to determine their effect upon the rate of growth of sugarcane. None of these compounds (2,4,5-trichlorophenoxypropionic acid, a-naphthaleneacetic acid and 4-chlorophenoxyacetic acid) when used in the concentrations of 200 and 1000 ppm at the rate of 90 gallons per acre showed any effects on growth. Applications were made October 13, 1952, to plants of varieties C. P. 36/105, C. P. 43/47 and C. P. 44/10 In addition to the above-mentione compounds, 2 separate formulatior of naphthyl phthalamic acid wer tested at the 5-pound per acre rat Analysis made at 7 and 11 day after application showed no sign ficant increase in juice purity o sucrose.

During 1952 three other com pounds were tested on varieties C. P 36/105 and C. P. 44/101, applica tions being made on October 6 an sugar analysis made 17 days later In this test trans-cinnamic acid, 2, dichloroanisole, and adenine sulfat were also found to be ineffective i increasing sugar content over tha of untreated plants.

In 1953 the naphthyl phthalami acid was tested at higher rates tha used the previous year. Treatment were made to variety C. P. 34/12 on October 21 at rates of 1, 2, 4 8, and 10 pounds per acre. Analysi made at 7 and 13 days after appli cation showed no significant effect upon sucrose content.

Dalapon (2,2-dichloropropioni acid) also became available in 195 and it was tested for its possible us in hastening maturity and as a de foliant. This was tested with vari ety C. P. 44/101 on September 2 a 1, 2, 4, 6, 8, and 10 pounds per acr rates. When analyses were made a 21 and 40 days after treatment n significant differences in sucros content or sugar per ton were found between any of the treatments. A these rates dalapon did not cause any appreciable leaf burn. In Octo ber higher rates of dalapon (5, 10 15, 20, and 40 pounds per acre) were used on variety C. P. 36/105 and samples taken at 6 and 13 days after spraying. These results also failed to show any sucrose increases among the treated plots over those of the untreated plots. At rates of 15 pounds per acre, or greater, there was a slight drop in sucrose. All rates of greater than 10 pounds per acre showed foliar injury.

## Summary

During the period 1951 to 1953 several chemical compounds were tested at the U. S. Sugarcane Field Station at Houma for their possible use in promoting earlier maturity, and as defoliants to aid in the removal of leafy treash. These compounds were applied as foliage sprays on various dates during September and October. Analyses were made at different intervals after application to determine the effects of these compounds upon sucrose and yield of sugar per ton. None of the known growth regulators tested (2,4,-D, 2,4,5-T, maleic hydrazide, 2,4,5-trichlorophenoxypropionic acid, 1 - naphthaleneacetic acid, 4 - chlorophenoxyacetic acid, 2,4-dichloroanisole, trans-cinnamic acid, adenine sulfate, naphthyl phthalamic acid, 2,2-dichloropropionic acid) at the rates used significantly increased the sucrose content of the treated plants. Such results may be explained by the fact that these known growth regulators affect growth through their influence upon certain enzymatic processes involved in carbohydrate metabolism. The synthesis of sugar, being one of these enzymatic processes, is also apparently deleteriously affected.

Of defoliants tested ("Shed-A-Leaf", 2 compounds containing pentachlorophenol supplied by Chapman Chemical Company, endothal, and 2 products of Lion Oil Company), only the "Shed-A-Leaf" at the rate of 30 pounds per acre killed the leaves to the extent that they might be more readily burned. However, with this treatment there was a tendency toward reduced sugar content.


## Literature Cited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(3) Skinner, J. C. The effect of maleic hydrazide on the sugar content of sugarcane. Technical Communication of Bureau of Sugar Experiment Station, Brisbane, Australia. No. 1. 1956.


[1] "Shed-A-Leaf" manufactured by Chipman Chemical Co.

## IN WASHINGTON

(Continued from page 388)

Benson, there will be a "fight to the finish" in Congress early next year. If he loses the fight, and present indications are that he will lose it, Secretary Benson's trump card will be a Presidential veto. The multi-billion dollar question will be —"Can Congress over-ride a veto?" The answer will depend on whether or not the Farm Bloc is reunited.

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According to U. S. Department of Agriculture officials, the hearing on the Estimate of Sugar Consumption in the United States for 1958 is tentatively scheduled to be held in Washington, November 19, 1857.

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### The Gilmore Manual

The Gilmore Publishing Company's *Louisiana - Florida Sugar Manual* of 1957 is off the press. This is the publication that lists all the Louisiana and Florida sugar mills. It gives the address, the names of the executive personnel, and the staff personnel, the telephone number, and other general information as well as listing the kinds and types of equipment installed in each mill. Our good friend Mr. Fred I. Myeres, is the editor and publisher.

The Louisiana - Florida Sugar Manual sells for $10.00 and copies may be obtained from The Gilmore Publishing Co., Inc., 525 Audubon Bldg., New Orleans 16, La.


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